

AMERICAN ARTISAN and Hardware Record

Vol. 80. No. 17.

620 SOUTH MICHIGAN AVENUE, CHICAGO, OCTOBER 23, 1920.

\$2.00 Per Year.

PREMIER

A New Warm Air Heater---"Just Off the Fire"

WE set a high mark for ourselves in designing the new PREMIER furnace but if the prompt and heavy response of dealers who have already made themselves acquainted with it is any indication, and we believe it is *the* indication, we have more than fulfilled our highest expectations.

THE PREMIER is made by men of vast experience and knowledge in the warm air heating field. It is built on a quality basis alone, the basis that nets *you* the most profit from each sale.

WE want to make *you* acquainted with the PREMIER. We want to send you the long list of Special Features that the PREMIER possesses. We want you to go over these details and see for yourself just how the PREMIER is constructed and what it will mean to you.

Let us tell you about our sales plan and how it protects you. The agency for the PREMIER in your territory will be worth much to you. Why not ask about it? Write today for this full information.

PREMIER WARM AIR HEATER CO.
DOWAGIAC, MICHIGAN



SPECO

5 TO 1
SOLID SAL AMMONIAC
Reg. U. S. Pat. Off.

Thousands of tinsmiths and mechanics use this economical way of cleaning and tinning soldering coppers. It saves \$4 out of every \$5.



"Cleans as it Tins"

Get your cake of SPECO today. Try it on your next job.

Ask your jobber for it

If you are a *tinsmith* and you have not as yet used SPECO for cleaning and tinning your soldering coppers, you are missing a great convenience and losing money.

If you are a *hardware dealer* and you are not selling SPECO, you are losing profits that your neighbor the druggist is making.

All the leading firms handle SPECO SOLID SAL AMMONIAC.

Wholesale Hardware Dealers, Retail Dealers and Tinsmiths, write us today and let us tell you how SPECO will make money for you.

Made only by

THE SPECIAL CHEMICALS COMPANY
HIGHLAND PARK, ILLINOIS



QUICK MEAL

Blue, Black or White
Porcelain Enameled
Coal Ranges

are the most up-to-date ranges made.

They will last a lifetime.

Place your orders now.

Quick Meal Stove Co.

Division of American Stove Co.

825 Chouteau Avenue
St. Louis, Mo.

FOUNDED 1880
BY
DANIEL STERN
Thoroughly Covers
The Hardware, Stove,
Sheet Metal, and Warm
Air Heating and Venti-
lating Interests

AMERICAN ARTISAN and Hardware Record

Address all communications and
remittances to
AMERICAN ARTISAN
AND
HARDWARE RECORD
620 South Michigan Avenue
Chicago, Illinois

PUBLISHED EVERY SATURDAY BY ESTATE OF DANIEL STERN

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS (Invariably in Advance) ONE YEAR POSTAGE PAID \$2.00
FOREIGN COUNTRIES ONE YEAR POSTAGE PAID \$4.00 CANADA ONE YEAR POSTAGE PAID \$3.00

Entered as Second-Class Matter June 25 1885 at the Post Office at Chicago, Illinois under Act of March 3rd 1879

Vol. 80. No. 17.

CHICAGO, OCTOBER 23, 1920.

\$2.00 Per Year.

Quite frequently we find a business man who claims that he cannot afford to take an active part in politics, giving as a reason that, for example, if he came out openly in favor of any one candidate, his opponent's supporters might take offense at his activity and that, therefore, he would be likely to lose some business.

Business and Politics

While in a few instances, there may be some basis for such a fear, the same argument might be made with respect to joining and being active in fraternal organizations or church work, and yet we find Catholics giving their trade to hardware dealers who are high up in Masonry or deacons in Methodist churches, and vice versa.

There is really no basis for this fear, except imagination, and the sooner business men quit hiding behind this imaginary obstacle to fulfilling their duties as American citizens the better for themselves, for their community and for their country; the minute the average business man wakes up and takes his proper place in the political life of this nation, the death knell of the political huckster, trickster or professional office holder will be sounded, and we shall have some real legislation enacted under which the business men of the United States can go ahead and do things without being hindered by all sorts of restrictive laws which in the majority of cases were enacted at the dictation of some special interest.

The present political campaign presents many reasons for active work on the part of the average business man. Tax readjustment is an absolute necessity, if we are to have any real material progress. The matter of re-sale prices is of prime importance to all retailers who sell trade-marked merchandise. In state and county affairs such matters as highway construction, fire protection,

banking and many others, are of more than ordinary interest; they affect the personal prosperity of every man who operates a retail, wholesale or manufacturing enterprise.

This is not intended as a preachment, but just a plain statement of facts, with an exhortation that every subscriber to American Artisan and Hardware Record take his proper place in the political line-up—not simply as a Republican or Democrat or what-not, but in accordance with what the particular candidate stands for, as shown by his record, rather than by his promises.

And when the decision has been made as to whom you will support—give him some real support: show your friends and acquaintances that you are a man who is willing to do the square thing, and that you are not letting the professional politician do all your thinking and working for the "organization" candidate.

The only reason why the professional politician has a chance to make a living at his "profession" is that the so-called "independent" voter is too lazy and indifferent to organize himself, although if we all used our intellect and intelligence properly we would bury the "professionals" so deep that they would never get above ground again.

♦ ♦ ♦ ♦ ♦

"What goes up must come down," is an old saying. Prices have gone up so high that they have reached a point which nobody was willing to admit even three years ago could ever be reached, and somebody must pay the piper, now that they have started on the downward again.

Paying the Piper

It will, no doubt, be remembered that American Artisan and Hardware Record called the attention of its readers, more than four years ago, to the fact that when the market should turn downward again the retailers

would be the first to be called on for reduction in prices and that, therefore, they were entitled to raise their selling figures on such stock as they had on hand, to correspond with manufacturer's quotations which were then mounting by leaps and bounds.

The shoe is on the other foot now—manufacturers are reducing prices on many lines, and retailers must follow suit. It matters not if a retailer has a quantity of pocket knives on hand, bought at a high figure, he must reduce his prices when the wholesale prices are reduced, if he is to hold his position as a progressive merchant and a leader in his community.

In a statement recently made by Archer Wall Douglas, Chairman of the Committee on Statistics and Standards of the Chamber of Commerce of the United States in his monthly report on general business conditions, the following points are brought out:

"No price understandings, nor withholding of products from the markets, ever succeed for more than a comparatively brief space of time in maintaining the price of any commodity.

"The general buying attitude is conservative, but does not stint its needs. The day is past when if you had goods, some one came and took them away from you, and paid the price you asked without kick or comment. Still the volume of business in general runs in large measures. For all of which the great harvest is mostly responsible.

"Unemployment grows slowly. It is most noticeable in industrial life, and in localities connected with textiles, leather goods, and automobiles. Coincidentally the strike fever is waning, and efficiency is increasing. For there is a fast growing public demand for service; a demand born largely of what we have endured on every hand for the past five years. We are fast coming to the period when the standards will be those of common sense and work honestly done. We shall, in all likelihood, not experience any shortage of labor during the coming months."

So long as it was merely a matter of having the goods in stock—the demand of the consumer being greater than the supply—there were good reasons for maintenance of high prices, but now that the spending fever is past, and the dollar doesn't come quite so easy, we must come down to lower price

levels, and the retailer who leads in this movement in his community is bound to reap the benefit, in greater volume of sales, quicker turnover, greater good will. He will be building for the future, while the retailer who insists on keeping up his prices on the basis of his old purchasing costs until his entire stock has been turned over, will lose in daily sales, slower turnover and dwindling good will.

♦ ♦ ♦ ♦ ♦

Forty-nine years ago, on October ninth, Chicago was a sea of flames and millions of dollars worth of property were destroyed by a fire, the **Criminal Carelessness** * origin of which was nothing but plain carelessness.

Tradition tells us that Mrs. O'Leary's cow kicked an oil lantern over while being milked, and, of course, we all say that nobody would nowadays be so careless as to place a lighted lantern where a cow might kick it over, yet it is a fact that every minute of the day—every day—some one is careless in some way, so far as fire is concerned: Matches are thrown away before being extinguished without regard as to where they may fall; oily or greasy rags are piled together in wooden boxes, although warnings have been published time and again that such waste material will catch fire even without having a match applied; open fires are built in alleys or yards and left unguarded; and in a thousand and one ways are the most common rules against fire hazard disregarded with the result that the loss from what is classed as "preventable fires" mounts into hundreds of millions of dollars every year.

In other words, every year a tax of several dollars is leveled upon the people of this country—every man, woman and child—for no other reason than that, as a nation, we are criminally careless.

Some day, we hope, laws will be enacted for the punishment by imprisonment of persons through whose carelessness a "preventable" fire is caused.

In the meantime, the merchants of this country can well afford to spend a few minutes toward the close of each day—and during each day—to make sure that no inflammable material is left around where some careless person may drop a lighted cigarette stump or a burning match.

Random Notes and Sketches

By Sidney Arnold

While "in the Service," at the Jeffersonville Quartermaster Depot, I had the good fortune of meeting a man who performed his very important duties in a very excellent manner, but the most interesting point about him was that nobody seemed to realize that there was anything difficult about the work he did.

He never found it necessary to go to "the Colonel" for assistance.

If there happened to be a special need for twenty cars of extra length, he didn't fret and fume about the lack of cooperation on the part of the Railroad Administration, but simply called Mr. So-and-So, or Mr. This-and-That on the telephone and said:

"Bill, I've got to have twenty forty-foot cars on the 'Slim Six' track by tomorrow morning, what can you do for me?"

By next morning, the twenty cars were there.

Later on, when he was transferred from the Transportation Section to the Warehousing Branch, I had the opportunity to watch him very closely, as he happened to be placed under my supervision, and I noticed how easy it seemed for him to get great quantities of work done with men who, for some reason or other, didn't "come up to scratch" when taking orders from somebody else.

He had a way of getting the best out of the men under him, pleasant in manners, though bluff of speech at times, a kindly smile on his lips, a friendly gleam in his eyes, a big, healthy body and a keen insight into human nature.

"The Lieutenant," as everybody calls him, even after he received his discharge from the Army, was retained in a civilian capacity as "Storage Supervisor," and is the only one of the three men at the Depot who really fills his job.

In fact, he knows considerably more about warehousing and the handling of men than the officer who has charge of the Warehousing Branch.

There ought to be a good place for this man in some big organization. He would be a very profitable investment.

* * *

I can always depend on my friend, James R. Graves, Sales Representative in the Chicago territory of the Detroit Vapor Stove Company, Detroit, Michigan, for a bit of good cheer when he comes to see me.

He was in my office the other day and told me this story:

A trolley car in Rochester crossed three consecutive streets bearing masculine names.

When the conductor called "James," a man signalled him.

"William," he called, another man got off.

An Irishman sitting gingerly near the door grew visibly nervous.

When "Alexander" was announced and a third man left the car, the Irishman arose, approached the conductor and said:

"I want to get off at Avnoo B. Me foorsht name is Michael."

My friend, J. C. Beggs of Bemis and Call Hardware and Tool Company, Springfield, Massachusetts, says that old jokes are like old music—just as enjoyable the hundredth time you hear them as the first time.

He gives this example:

"Father," inquired the little brain twister of the family, "when will our little baby brother be able to talk?"

"Oh, when he's about three, Ethel."

"Why can't he talk now, father?"

"He is only a baby yet, Ethel. Babies can't talk."

"Oh, yes, they can, father," insisted Ethel, "for Job could talk when he was a baby."

"Job! What do you mean?"

"Yes," said Ethel. "Nurse was telling us today that it says in the Bible, Job cursed the day he was born."

* * *

A certain amount of courage is necessary in every department of life, says my friend, Samuel H. Jacobs, of Fanner Manufacturing Company, Cleveland, Ohio.

He illustrates the idea with this smile-provoking story:

A young man sat on the seashore by the side of a beautiful young woman.

They were sitting very close together.

He leaned toward her and she let her parasol drop over the shoulder next to him and waited expectantly.

Nothing happened.

After some minutes, she looked up coyly.

"I thought, maybe, you were going to try to kiss me," she observed.

"I was thinking about it," he replied, "but I've got sand in my mouth."

"Swallow it," was the quick retort. "You need it in your system."

* * *

Bravery is of many kinds. When death is hurtling through the air on battle fronts, it is heroic bravery which sustains the men who go over the top.

There is the bravery of upholding one's convictions in the face of ridicule.

Less picturesque but worthy of high emulation is the bravery which refuses to surrender to discouragement. This form is well set forth in the following verses:

The Brave Men.

Here's to the men who laugh
In the face of grim despair;
Who gather the tares and chaff,
But sow with a cheerful air.
Here's to the smiling men,
Who, giving, can take a blow,
And rise to the fight again
When others have laid them low.

Here's to the men who grin
When plans that they build go wrong,
And straightway new plans begin
With courage and purpose strong.
Here's to the glad, brave men,
Who, battling, expect a bruise,
And rise to the fight again
Undaunted by the fights they lose.

Here's to the men who smile
With faith in the morning light,
And bravely await the while
Till victory crowns their fight.
Here's to the fighting men
That always need not succeed,
To rise to the fight again—
The brave in defeat we need.

Up-to-the-Minute News Siftings

*Items of Interest to Dealers Gleaned from Many Fields.
National and Local Business Plans, Problems, and Practices.*

SAYS DEFLATION WILL COME WITHOUT PANIC.

T. E. Wilson, President of Institute of American Meat Packers, at Investment Bankers' Association Ninth Annual Convention held in Boston, predicted deflation of American Industry without panic.

A general survey, he said, shows that a shortage of coal and a failure to increase individual productivity appear to be the only two unfavorable aspects in the immediate industrial situation. He said further:

"The pressing necessity of the present is to maintain a courageous and optimistic morale. The descent from the heights of abnormal production to the normal levels of peace times should be reached by gradation and not by perpendicular drops.

"No industry upon which large bodies of labor are dependent for a livelihood or upon which a considerable number of producers are dependent for a market for their raw material has a moral right to close its doors in such a time as this merely to prevent a shrinkage in accumulated surplus or for the purpose of limiting production so as to create artificial values for materials on hand.

"To do so is to take advantage of extraordinary conditions the burden of which should be shared by all. I am glad to say that we have had but few such examples.

"The process of readjustment is now in full motion. The manufacture of luxuries is being curtailed. The spending fever is abating. Commodity prices are declining and further deflation seems to be in progress.

"A recent survey has been made of the industrial conditions of our country, which show that economically the United States is better off than any other country of the world.

"While money is still tight it should not continue so indefinitely. There is great encouragement to be drawn from the fact that there has been no substantial decrease in bank deposits during the last few months. Individual saving accounts show marked improvement. This seems to indicate a movement toward thrift and that the period of reckless and extravagant spending is past. Discounting of bills by industrial concerns appears to be very general. The business outlook appears to be good in nearly every section.

"It is time for Washington and the industries of the country to realize that the war is over.

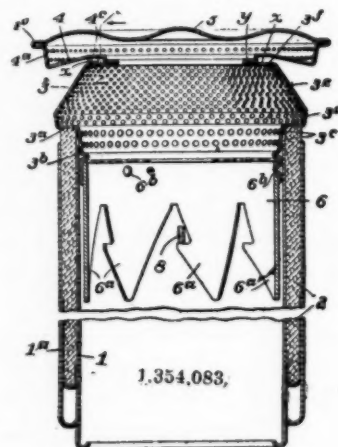
"What this country needs now is a revival of that spirit of individual enterprise and high industrial purpose upon which the greatness of this country has been built.

"Business should realize that it is now time to grasp again the helm of its own destiny and take up once more the task of steering into broader channels of service. Business should realize that it can not rely upon the Government to solve its problems through

legislative enactments. Industry should do more to educate the people in regard to its business."

Gets Patent for Air Distributer for Oil Stoves.

United States patent rights have been granted to Fred E. White, Gardner, Massachusetts, assignor to Central Oil and Gas Stove Company, Gardner, Massachusetts, a Corporation of Massachusetts, under number 1,354,083, for an air distributer for oil stoves described herewith:



An air distributer for wick stoves having an annular perforated wall and a substantially horizontal annular perforated portion at its upper part, and a distributor cap held above and spaced from said horizontal portion and providing an air distributing space between itself and said horizontal portion.

It is an elementary principle that combustion depends upon supply of oxygen. The device shown in the accompanying illustration appears to possess considerable merit as an aid to increase combustion.

Familiarity with the carburetor makes it easy for the average man today to understand the advantages of an air distributer for wick stoves. Therefore, the inventor of this air distributer for oil stoves has no pioneer work to do in obtaining general acceptance for the principle involved in his device.

Good Reputation Is an Asset.

A permanent or desirable reputation is slow in coming, but once gained, while it may be temporarily obscured by misunderstanding, or misconstruction, or mistaken knowledge of your acts, no thoroughly good reputation, based on character and on actions which have been guided by correct principles, can ever be permanently destroyed except by yourself.

As you go through life you will need the assistance, credit, and the confidence of your fellow men.

Credit and confidence are based on reputation and on the cumulative influences of your acts far more than upon any other asset you may have.

Credit, confidence, and intelligent productive labor, together with cooperation, create prosperity, both of the individual and of the community.

The lucky never believe in luck.

The Week's Hardware Record

*What Retailers, Jobbers, and Manufacturers Are Doing.
Latest Selling Methods. Experiences of Successful Men.*

OUTLINES WAYS TO PROMOTE RETAIL MERCHANDISING.

Activities of commercial organizations in retail trade extension work are set forth in a comprehensive and instructive bulletin just issued by the Organization Service Bureau of the Chamber of Commerce of the United States.

The material contained in the bulletin was gathered from all parts of the country where different methods of trade extension work have been carried on.

In enumerating the many factors in retail trade extension the bulletin says that "Every activity of a chamber of commerce which increases the purchasing power of its community and the surrounding territory has its effect upon retail business.

"Civic improvements, industrial development, good roads activities, improvement of transportation facilities, cooperation with county farm bureaus and improvement of marketing facilities of farmers fall within this category.

"These community development activities, of course, are very important from the larger viewpoint of retail trade extension.

"Just what it means to the retail business of a town to have clean and well lighted streets, good schools, good water, attractive parks and playgrounds, ample facilities, busy factories, a prosperous farming country, etc., requires no argument.

"A bare listing of these various tangible and intangible items indicates their importance to one who has given any thought to the factors which bear upon successful merchandising in any community.

"The essential object of commercial organization retail trade promotion is, of course, the development of business through cooperative effort.

"The elements which influence its success are cooperation of merchants, quality, suitability, and price of their stocks, service, advertising campaigns which will reach the buyers in retail trade areas, displays which attract attention and stimulate buying."

Some of the special methods of promoting retail trade discussed in the Bulletin are: Acquaintance Trips and Community Houses, Special Retail Sales Days, Dollar Day Sales, Other Special Day Sales, Spring and Fall Openings, Salesmanship Clubs and Retail Selling Classes, Compilation of Mailing Lists.

In regard to the financing of retail trade extension activities, the bulletin points out that the financing end of the work in many cases is provided by a budget set aside by the local chamber of commerce.

In other cases, the chamber of commerce provides the proper operating talent and force and carries these

and other overhead expenses, such as rent, lighting, office equipment, stationery, etc.; the expense for advertising, printing, etc., are covered from funds raised by the retail merchant members through special assessment.

"In theory all of the activities of the chamber of commerce," the bulletin says, "should be financed by the chamber out of the revenues it receives from the dues of its members, but local limitations in many cases make it necessary to resort to special assessments, particularly in the cases of such activities as retail trade extension where, although the community is benefitted in the long run through the building up of an efficient system of retail distribution so essential to its well being, the merchant groups are immediately benefitted through an increased volume of business."

The bulletin specifies that the retail trade work of the chamber of commerce includes a number of activities which are not directly related to the trade promotion or extension such as:

"Obtaining speakers to address merchants on retail trade problems.

"Prosecution of transient merchants who have not complied with local regulations.

"Warning the public against sales of goods by peddlers who misrepresent their wares.

"Championing cause of retailer in all legislation affecting his interest, local, state or national.

"Protecting members against advertising mediums which have no advertising value.

"Promotion of cooperative delivery, uniform closing hours and holiday agreements."

"Obtaining the adoption of uniform rules concerning the return of merchandise, granting of discounts, etc.

"Conducting of pay-up campaigns.

"Obtaining from organizations in other towns and the issuance to its members of confidential information on check forgers, shoplifters, fake solicitors and all kinds of frauds.

"Exchanging of credit information among its members."

It is worth while to keep in mind the fact that AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western hardware and metal prices corrected weekly. You will find these prices on pages 82 to 87 inclusive.

Predicts Cutlery Shortage.

Don't delay your holiday cutlery shopping, is the note of warning sounded by the American Cutlery Bureau of Information, which points out that the war has caused quite an exceptional situation in the cutlery supplies throughout the world. During the war practically all cutlery factories in Europe and many in

this country were converted to the manufacture of arms. In consequence European production virtually ceased and many countries formerly receiving their cutlery from abroad have gone on short rations for four years.

Allowing for a shortage of only 25 per cent every year during the war, this means that the world is over a year behind in its cutlery supply.

The fact is that it is really much farther behind when we consider that foreign producers of cutlery have not been able to attain anything like pre-war output.

Consequently foreign buyers are besieging American cutlery makers with requests for goods and our manufacturers find their facilities taxed to the limit, in view of the steady domestic demand and foreign appreciation of American quality.

While the American cutlery industry is still confining the large bulk of its distribution to domestic markets, it is anticipated that the large holiday demand will necessitate a rationing program which will spread supplies out thin, and higher prices may be forestalled by doing one's cutlery shopping early.

Pittsburgh Hardware Dealers Have Helpful Meetings.

Prosperity continues to smile most graciously upon the hardware retailers of Pittsburgh, Pennsylvania.

The secret of the almost continuous and pleasant staccato of the cash register bell in their stores is not difficult to obtain.

It is directly due to the activity of the Pittsburgh Retail Hardware Dealers' Association and the interest maintained in the regular monthly meetings of that organization.

The October meeting of the Pittsburgh Retail Hardware Dealers' Association was held Friday evening, October 22d, at Hotel Chatham, 423 Penn Avenue, Pittsburgh, Pennsylvania.

The gathering was in charge of George H. Klauss, who kept things moving in a lively pace.

The meetings of the Pittsburgh Retail Hardware Dealers' Association are never dull for the reason that everyone in attendance has something to say of value to others.

Discussion of price fluctuations, market conditions, salesmanship, buying, store service, delivery, and other topics brought out helpful suggestions from practically every member present.

Trade-Mark for Explosives Is Registered.

Western Cartridge Company, East Alton, Illinois, has secured United States Patent Office registration,

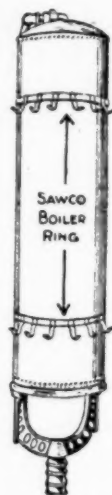
123,008.

MINIMAX

The particular description of goods to which it is applied is shot shells, blasting caps, and cartridges, shot, smokeless and semismokeless powders for ordnance and small arms ammunition, primers, and gun wads. The company claims use of this trade-mark since July 10, 1919.

Sawco Boiler Ring Is Useful Household Device.

Provided that it has the merit of usefulness and economy, any article added to the hardware dealer's stock means enlargement of the volume of his sales.



The enterprising retailer is always on the alert for new commodities which broaden the service of his store.

Within the scope of this class of goods appears to come the Sawco Boiler Ring, shown in the accompanying illustration and manufactured by the F. H. Sawyer Company, Limited, 76 Greenwich Street, New York City.

Especially in big cities where the tendency is to make kitchens smaller rather than larger, any device which saves valuable space is certain to commend itself to the housewife.

In addition to its evident usefulness, the Sawco Boiler Ring not only saves space but effects an economy by utilizing the heat of the hot water boiler for drying towels, cloths, and various kitchen utensils.

Another advantage which it possesses is that it may be placed on the lower half of the boiler and used for hanging such stove implements as poker, lifter, shovel, and shaker.

The Sawco Boiler Ring is said to be easily adjusted to any sort of boiler. It is made with a dull nickel finish and, therefore, is not readily subject to rust.

Each set consists of one band, six hooks, bolt and nut, all neatly packed in a box 3x4x1 inches.

Descriptive literature and prices to dealers may be obtained by writing to the manufacturers, F. H. Sawyer Company, Limited, 76 Greenwich Street, New York City.

Revival of American Merchant Marine.

During September, for the first month since the armistice, according to returns of the Bureau of Navigation, Department of Commerce, the increase in the American seagoing merchant marine owned by American shipowners has equaled and exceeded the increase in the Government-owned ships built with appropriations by Congress. At the last session Congress in the appropriation bills changed the war policy and directed the Shipping Board to maintain itself by sales of ships and shore property without further appropriations. During September the fleet of seagoing ships of 500 gross tons or over of American shipowners rose to 1,829, of 4,625,324 gross tons, an increase during the month of 25 ships of 116,335 gross tons, while the Government-owned tonnage during the month increased only 20 ships of 88,855 gross tons, giving a Shipping Board total of 1,698 ships, of 7,288,208 gross tons, on October 1. Since January 1, 1920, however, the Government-owned tonnage has increased by 233 ships, of 1,347,466 gross tons, while the commercial marine of American shipowners has increased only 129 ships, of 536,926 gross tons.

Progress must be carefully watched.

Convention of National Hardware Association of the United States Sees Need of Uniform Deflation.

Speakers at the Various Sessions Put Strong Stress Upon Ability of Nation to Develop a New Prosperity.

It is because men of sane judgment and broad vision come together in Convention for the strengthening of national interests through the operation of a country-wide industry that we as a people are able safely to weather the financial squalls which threaten the safe voyage of the ship of prosperity.

The significance of the Twenty-sixth Annual Convention of the National Hardware Association of the United States and its Auxiliaries, therefore, is of

ness which warrants their faith in the new prosperity.

Theirs is not the faith of credulity nor of uncontrolled imaginations. It is a belief built upon facts and principles.

That readjustments and deflation of prices are inevitable was freely admitted throughout the sessions of the Convention. All were of one mind in holding to the conviction that the necessary reconstruction of finance and industry will be brought about without panic or depression.

Tuesday, October 19, 1920.

The first day of the Convention of the National Hardware Association of the United States was devoted to the meeting of the Automobile Accessories Branch.

Robert H. Treman, President of the Association, opened the morning's session, which began at 10:30 o'clock, with brief and illuminating comments upon the main problems which confront the people of our day.

Among other things he said:

"We are going through troublesome times. It is nothing but the natural evolution of a situation which has to develop. It is a time for clear thinking and of deliberate action—of no frenzy, but with courage to go ahead on each of these problems as they come up. Having full faith in the American business men, we will work out a satisfactory solution of the problem in time. We are all gratified with the development and growth of this branch of our Association. It is a question whether the Branch has grown to such an extent that the tail will wag the dog.

"Mr. Nichols, your Chairman, has been most instrumental, with the Secretaries, in developing this organization. I have pleasure in turning over the work of the Convention this morning to him, and it will be directed in such a way that it will be a most profitable meeting. I have pleasure now in turning the meeting over to Mr. Nichols."

The Automobile Accessory Branch of the National Hardware Association of the United States has gained in importance and service with the growth of the accessory business within the hardware trade.

That this Branch of the Association is alive to its responsibilities and opportunities was evidenced by the annual address of its chairman, A. H. Nichols of Detroit, Michigan. He spoke as follows:

Annual Address of A. H. Nichols, Chairman Automobile Accessory Branch National Hardware Association of the United States, Delivered October 19, at the Convention in Atlantic City, New Jersey.

"I look forward to these conventions with a great deal of pleasure, even though I realize that each meeting marks another milestone in Life's journey. To me it is one of my greatest pleasures, being with you at these times, renewing the acquaintance of those whom



Robert H. Treman, Retiring President, National Hardware Association of the United States.

wider import than it would seem on first consideration.

The delegates to this Convention came from all sections of the country. They have numerous points of contact in their various communities with the leaders of thought in civic and commercial affairs. Consequently, it may truthfully be said that they are not merely delegates to a hardware convention but representatives of the best sentiment and hopes of the entire country.

The good accomplished by this convention is not merely of advantage to the hardware jobbers of the United States. Its influence reaches into every center of production and distribution. The strongly buttressed faith of the hardware jobbers in the ability of our Nation to carry forward its traditions of order, progress, and justice is a bulwark against the tides of pessimism.

The delegates to the Convention were men of vision, yet not visionaries. Their knowledge of trade conditions reinforced by sturdy Americanism gives them an insight into the economic principles of busi-

I know from past experience as friends; as well as making the acquaintance of those who are with us for the first time.

"There is perhaps no time in the world's history when more benefit can be derived from gatherings of this kind than at the present time. For never has the business man had the problems to solve he has at the present moment. These problems can not be solved by a corporation, firm, or individual. For a cancer is eating at the heart of prosperity, and the only remedy, the only cure, is to be found in get-together meetings of this kind.

Menace of Discontent and Hatred.

"Living as we do in a land that has been blessed as no other country has ever been blessed, surrounded everywhere by prosperity, we all should be enjoying that peace and contentment that comes from success that rightly belongs to us; yet in place of contentment we find discontent, unrest and hatred. This thought has been allowed to grow, until we all have contracted a certain portion of the disease. The manufacturer, well knowing the great demand for his product has become discouraged at his inability to keep production up to normal, and has assumed the attitude, even to his best customers, of 'take it or leave it alone.' While the distributor, seeing his expenses increase by leaps and bounds almost daily and fully realizing the great opportunity he has to increase his business, only to find his shelves empty, has settled back to that pessimistic state, which causes him to look with glee to the day when revenge will be his.

New Methods of Competition.

"While the general public mind has been poisoned, new methods of competition have come up, and many thorns added to the merchant's pathway, as a result of the use of that threadbare word "Profiteer." Committees with no merchandising experience whatever have been appointed to investigate, apparently their greatest desire being to establish a concrete case against some of the old and long established business houses whose success for generations has been the result of the foundation always being erected on the rock of honor. While labor has been allowed, possibly encouraged, to demand more and give less each day. A tax has been levied from almost the moment the raw material appears in sight, and an additional tax has been added at nearly every turn of the wheel. This tax has more bearing on the high cost of living than the average consumer realizes.

"Only yesterday I was told of an article on which the total tax was 24 per cent of the cost, while the expense of collecting this tax is so great that should any business firm undertake to operate under the same percentage of cost, they would have long since been in bankruptcy.

Competition Is Not an Advantage.

"I do not agree with those who tell us that competition is the life of trade, for it is competition that has brought about this very condition. It is competition that tempts man's honor, and kindles that fire of selfishness that causes him to think more of self than of home or his country. It is competition that leads men to dislike their city, envy their neighbor, and hate their competitors.

Cooperation Essential to Prosperity.

"Now if we substitute cooperation for competition our problems are solved, at least to the extent that honest cooperation is allowed to enter. The members of this Association have reasons to be proud of our growth, and the benefits that have been received. Our success is not the result of the work of any committee or individual, but is the result of the honest cooperation of our members, and every member has been benefited by his membership, only to the extent that he has discarded that competitive thought and encouraged the cooperative idea.

"And as a result of this cooperation the jobber no longer has any fear of automobile accessories, but looks with pride to the monthly statement, which now shows that the accessory department is one of his strongest and most satisfying departments, while the manufacturer finds the jobber his most substantial, and in the majority of cases, the most desirable channel by which he may dispose of his output. He also realizes that the purchasing power of the hardware jobbers is by far greater than any other combination.

Big Opportunity for the Retailer.

"Although a great deal has been accomplished, yet we have a great deal of important work before us. Possibly the retailer of hardware has not yet fully realized the great opportunity this new industry has given him to increase his sales. Should we not assist the retailer of hardware and endeavor to show him that the goods that have formerly been kept in the background should today occupy a more prominent place in his store? That wrenches, pliers, cold chisels, machinists' hammers, and all such goods should be displayed as conspicuously as cutlery and other goods have been in the past?

"Then, there is the percentage of profit that should be considered, especially where a resale price is recommended. To me it is not satisfactory to be told that our profit has increased as a result of larger sales, when the records very plainly show that in spite of larger sales, the percentage of cost of doing business has increased. We all are aware that the price of goods will decline long before we will be able to reduce our cost of doing business. As a reminder of this fact, it would only be necessary for us to consult those in other lines of business at the present moment.

Pleads for Exchange of Ideas.

"The only object of this meeting is to exchange views. We have no desire to compel a change in the policy of any firm or individual, our only law being cooperation. While those who prefer to remain seated are welcome, yet let us all remember that the success of this meeting depends absolutely upon the interchanging of ideas. I do not believe there is a person in attendance here today who has not at some time successfully put into operation an original idea, or has not had some experience that he can rightly pass on to others. If each one of us will express a new thought, we all will return to our homes with many new ideas. Therefore, let us keep this one thought in our minds, 'Freely ye give, freely ye receive.'

"In conclusion, may I call your attention to our Third Annual Exhibit and Meeting, to be held in St. Louis, Missouri, November 30th, December 1st, 2nd

and 3rd. Our two previous meetings have been so successful that we realize we have outgrown the hotel for exhibits, as no hotel today has sufficient space to accommodate our exhibitors. At the Coliseum there will be nearly 300 booths erected for the use of our associate members. These booths are furnished absolutely free. I would, however, suggest if you have not already made your reservations for this meeting, that you take the matter up with Mr. George Fernley without delay as the large majority of booths have already been assigned. It is earnestly requested that each jobber have his buyer attend the St. Louis meeting, as he will have no better opportunity of selecting the lines he wishes to carry for his spring trade, as well as display in his catalogue.

"Inasmuch as our time at this meeting is somewhat limited, I would suggest that our remarks be short and to the point, so that each member can take part in the different discussions that will come up."

At the close of Chairman Nichol's annual address, Secretary-Treasurer, T. James Fernley, read a letter from Alfred Reeves, Manager National Automobile Chamber of Commerce, New York City, in which he regretted his inability to be present and deliver the address for which he was scheduled on the program.

In commenting on the letter, Chairman Nichols said:

"Possibly all of you have heard that this is the beginning of the end, etc. Now, as a matter of fact, I never knew a year since this new industry has been established, but that automobile factories did not close at this particular time. There has always been a time of taking inventories and making adjustments, getting ready for the coming season's business, and it always has been to my knowledge, at least, about this particular time.

"It is true that there is a united action on the part of a number of manufacturers of automobiles to reduce the price, more particularly on the cheaper lines of cars, and they are taking hold of this particular moment, when their factories are closed, to give out word that they are closing on account of their troubles, and are endeavoring at the present moment to make contracts at a much lower price.

"That is a business condition. The demand without doubt will be fully as large for automobiles in the coming year as in the past. Consequently in my judgment without a doubt the automobile accessory business will be fully as large, and from a hardware standpoint, taking in view the fact that there is a great increase of the display of the hardware dealers, it will be much larger. I do not think there is any danger of any trouble whatever with regard to the demand for your goods.

"I believe the demand will be as large the coming year as in the past. Possibly there will be some reduction in the prices, but that will have no bearing whatever on the demand. The prices may be cheaper, but the people will have the money to pay for them. You should bear in mind this fact that this country has nearly one half of all the money in the world, and a great deal of that will be spent for automobiles and automobile accessories."

The tire and tube situation was to have been dis-

cussed by D. T. Henne, Columbia Tire and Rubber Company, Columbiana, Ohio; O. L. Weaver, The Star Rubber Company, Akron, Ohio; and F. I. Reynolds, Empire Tire and Rubber Company, Trenton, New Jersey.

Mr. Henne and Mr. Weaver were not present at the meeting. Mr. Reynolds sent a long communication on the subject of the tire and tube situation which was read by the Secretary-Treasurer, T. James Fernley.

Chairman Nichols then called upon Mr. Logan of the United States Tire Company, who said that the future of the tire business and of the automobile business looms up bigger today than ever before.

"We are going to sell more tires," he said "and we are going to sell more automobiles in the United States in the next eighteen months than in the history of the industry. There is nothing to be discouraged about. You have a good product to sell. You are handling an article which is staple that the people must have. There is no such thing any more as a pleasure car. All motor cars today are passenger cars and commercial cars and people have to have tires. You can not run automobiles without them; and they are going to run automobiles as long as they live."

The Secretary-Treasurer, T. James Fernley, asked the Chairman to introduce to the meeting Matthias Ludlow, President National Retail Hardware Association, and Herbert P. Sheets, Secretary of that Association. Mr. Ludlow said that it gave him great pleasure to be present and to bring to the Convention the greetings of the National Retail Hardware Association.

Mr. Sheets spoke briefly about the problems of retail distribution with special reference to automotive accessories.

Chairman Nichols then called on Messrs. Hardy, Williamson, and Alexander, Canadian jobbers, to address the meeting.

These gentlemen were followed by a Mr. Goeth, the representative of the Texas Hardware jobbers, who said that conditions were good in his state and that hardware people are buying all the goods they can get.

The afternoon session of the Automobile Accessory Branch, Tuesday, October 19, was called to order at 2:30 o'clock by Chairman A. H. Nichols.

The chairman read a quotation from a newspaper in reference to the number of automobiles shipped to India. He said that 4,015 came from the United States out of 15,292 that were shipped to India; that the United Kingdom supplies 616, Canada 510, Italy 35, and France 19. During the pre-war years—1913, 1914—the number of cars arriving was 2,880, of which the United Kingdom supplied 1,669 and the United States 868. During the first post war year, March, 1918, to March, 1920, the number of cars arriving was 9,925, of which America sent 9,353. That should give you a pretty good idea in regard to the automobile business for the coming year.

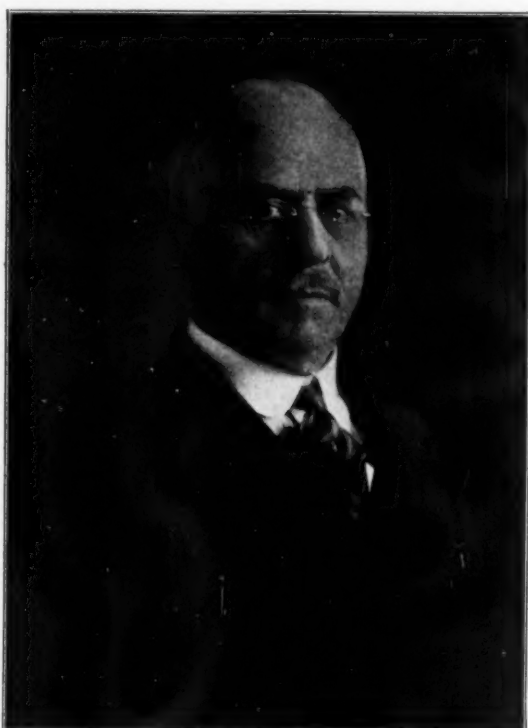
The chairman called for remarks from the delegates as to the general condition of the automobile business in their various districts. On a request for a show of hands as to whether the members expected an in-

creased business next year over the present year, the general sentiment indicated in the affirmative. A show of hands indicated that all the members present expected an increased automobile accessory business.

Several delegates expressed their opinion that there would be an increased automobile business the coming year. There was the same expression of sentiment among the speakers as shown at the morning session in reference to the necessity for cooperation between the jobbers and manufacturers in the matter of the sale of tires.

The chairman announced the next subject for discussion was "How many brands of spark plugs, piston rings, etc., should a wholesale distributor carry?"

Mr. Vayo was called on to express his opinion on the subject. Mr. Vayo spoke at some length relative to the spark plug situation. He said there were some dealers that were handling as many as 120 different



A. H. Decatur, Newly Elected President, National Hardware Association of the United States.

brands of spark plugs. He expressed the opinion that any jobber that bought over three brands of spark plugs and stocked them was crazy. He said there were a large number of spark plug manufacturers who did but little business, but succeeded in making the dealers think they should handle their particular spark plug, when in fact it was only necessary for the dealer to handle not to exceed three or four brands in order to do a good business.

Mr. Waterman said he found it necessary to keep in stock at least four styles of spark plugs to meet all conditions of the trade.

The chairman asked the question in regard to the number of styles of piston rings that should be carried in stock.

Mr. Cogan: "I should say the jobber should handle three kinds of piston rings."

The chairman called for remarks on the subject of price guarantees.

Mr. Fay: "I am in the category of a manufacturer making a new line of goods. I have been offering it in this room and in the public print last year. Some trade I have solicited personally to buy my product, and my understanding as a manufacturer of this question of guaranteeing the sale of my product is just this: At any time this product can not be sold and does not do the work for which it is made I would rather have that material in my possession and refund to my customer what he paid for it and sell it again to somebody else who has the sales force that can sell it. The idea of a manufacturer putting out material that he has not sufficient faith in to back up with a guarantee of salability, and supplement that with missionary work, and by proper designs of various articles which he produces, is to my mind too much like trying to make money quick without any come-back."

Mr. T. James Fernley: "There is a great deal of nervousness in the market. Five minutes ago I got some information over the telephone of a gradual decline of a certain commodity that runs into scores of millions of dollars—of from 30 to 15 cents—a very gradual decline, when some wholesalers in the country have probably one hundred thousand dollars' worth of that commodity in stock. I think it would be quite appropriate probably to send those people a telegram of sympathy. Now, this decline has not struck us. Let us hope it will never come, but there is a nervousness in the air. These men who are buyers are suffering from a little shock to their nerves. They hear of a disease in a neighboring town and they are wondering whether it will not come into their town or city. Now they need a little reassurance."

Reference was made by some jobbers to the practice of some firms in taking advantage of cash discounts after the time for their being entitled to the discount had expired. Several jobbers expressed the opinion that this was not a universal practice among the jobbers and in cases where it was done they considered it very unbusinesslike.

Mr. Shapleigh, of St. Louis, said they had not been in the automobile accessory business very long, that personally he was not very well acquainted with it, that he considered the matter of the hardware people handling automobile accessories was a matter of evolution, and that it would have to go through the same experience as the old bicycle business did.

The chairman said S. Edward Rose of Barker, Rose and Clinton Company, St. Louis, Missouri, who was to speak on the subject of "The St. Louis Meeting as a Catalog Conference," was unable to be present, but a paper by him would be read by Mr. Geo. Fernley.

Mr. Fernley read the paper, which is, in part, as follows:

"The hardest task of the year for the buyer or the manager of the Motor Supplies Department is the publication of the annual catalog. Its distribution later than March 1st means lost business, but to make early publication possible interferes seriously with the special duties incident to the opening of the year, with the result that the majority of our catalogs do not reach our dealers until May 1st or later.

"The annual Motor Supplies Catalog is so indispensable in pulling business that a proposal that prom-

ises to promote it, is timely. The St. Louis meeting as a catalog conference will afford a wonderful saving of time and money to any jobber who will plan now to avail himself of it. It will do this in three ways—by saving the editor who is necessarily a high priced man, three weeks of work by advancing the date of publication by at least a month; by eliminating errors, thus making a better catalog. This is not theory, but fact based on the writer's actual experience at the Chicago meeting last year.

"Any jobber knows by Thanksgiving what his lines for the following year are to be. Let him take a rough draft of his next catalog to St. Louis and submit it to the manufacturers present, whose goods he proposes to describe. Practically all of them will be there, and without exception will welcome the opportunity to assist in the final preparation of the copy.

"The writer did this last year, having prepared a book which he supposed was substantially correct. He shudders even yet as he thinks of the errors that would have appeared in the book, except for this final authoritative review.

"Probably more than half of the jobbers who publish catalogs do the work themselves, and whereas these remarks apply particularly to them, every editor knows that a considerable amount of personal attention is necessary to the publication of a book that is made by professional catalog makers.

"Attendance at the Atlantic City meeting may be in the nature of an emolument for privileged officials. Whether this is so or not, the winter meeting is not to be so judged. This meeting is for the practical heads of Motor Supply Departments, who in very many cases are not officials of their firms. It is a workshop, not a forum; deeds, not words, are in order. Less time is devoted to meetings, more to private conference. It is a man to man affair, and most every man there is from Missouri. But whether you believe this or not, there is one big outstanding feature of this next meeting which alone affords an opportunity so valuable that no jobber publishing his own catalog can possibly afford to overlook, namely, The St. Louis Meeting as a Catalog Workshop."

Considerable discussion followed as to what the proper profit should be on automobile accessories. Several of the manufacturers present expressed the opinion that the jobbers should secure a profit of from 33⅓ to 50 per cent on the cost of the goods. Several jobbers were of the opinion that a profit of 25 per cent should be secured on the selling price.

The chairman again called the attention of the jobbers and manufacturers to the importance of the meeting of the Accessories Branch to be held in St. Louis.

The meeting then adjourned.

Wednesday, October 20, 1920.

The morning session of the National Hardware Association of the United States, Wednesday, October 20th, was in the nature of a general open meeting to which the members of the American Hardware Manufacturers' Association, ladies, visitors, and all interested were cordially invited.

After the opening remarks of President Robert H. Treman, all joined in singing the national anthem, "America."

Dr. Russell H. Conwell, President of the Temple University, Pastor of the Baptist Temple, Philadelphia, then gave the invocation in the form of a fervent prayer.

Following Dr. Conwell's prayer came the annual address of President Robert H. Treman.

The principal parts of his speech are herewith reproduced:

Annual Address of Robert H. Treman, President of the National Hardware Association of the United States, to the Members Attending the Twenty-sixth Annual Convention at Atlantic City, New Jersey, October 19th, 20th, 21st, 22nd and 23rd, 1920.

"In reviewing events of the past year since our last Convention may I refer to some of the conditions which stood out prominently at that time and were noted in your President's address?

Condition in October, 1919.

"Most manufacturers were busy but had difficulty in securing sufficient materials, not even an approach to normal labor efficiency. Production and shipments were yet retarded by the continuance of strikes, of which it was said at that time there were about 350 important ones in progress. There was beginning to be an insistent demand for many goods, the production of which was interfered with or abandoned during the war.

"Foreign trade, especially exports, while heavy, was restricted by the demoralized condition of foreign exchange. Domestic distribution was at a very high rate, the most serious problem being to obtain merchandise, and the shortage was becoming more acute each month. High prices did not seem to check retail buying, with the constant bidding up of prices to higher levels.

"Premiums were offered for prompt shipments in the iron and steel market. Iron and steel exports were about 25 per cent higher than in July. The steel strike was on and affected production.

Extravagance Was Universal.

"What was particularly in evidence was the extravagance manifested on every side in the indulgence in luxuries and the abnormal purchases of goods, without regard to the high prices, by a class who previously had never been able to indulge. The reaction from the careful use of money during war time was widespread and disturbing. Thus, with the abnormal demand and the limited output, nothing else could be expected but still higher prices and additional profiteering.

"There were evidences on every side of social unrest, which found expression not only in demands for higher pay, for six hour day, five day weeks, and Union recognition, but also for a larger voice in the management of business and share in profits, nationalization, and even for a complete retirement of capital.

"It was pointed out that banking credit was, at that time, greatly extended because of the government borrowings, but that such heavy borrowings should soon be unnecessary, and then bank loans should be reduced and deflation of bank credit begin.

"Such were the conditions a year ago when the Convention was in session.

Great Fluctuations in Call Money.

"Later in the autumn there were great fluctuations in call money and commercial paper rates and in-

creased demand for funds from private business, both in commodities and securities. Speculation attained an unprecedented activity embracing not only securities but real estate and many different commodities. Reports from time to time showed constant expansions of loans by member banks. Serious weakness developed in foreign exchange, labor conditions were distinctly unsettled. The sustained buying capacity of consumers explained the continued expansion of wholesale and retail trade.

Increasing Demands for Credit.

"Owing to the rapidly increasing demands for credit, not only from this country but from the world at large, which demands centered upon the reserves of the Federal Reserve Banks, the combined reserve dropped from 50 per cent to 47 per cent during the month of October. This led to an advance by the Reserve Banks of their discount rates to the extent of about $\frac{1}{2}$ per cent in November, and was later followed in December by another advance. It was not expected that this would bring about an immediate strengthening of the reserves, but these advances in discount rates would serve as a warning that it was necessary to begin to restrict credit expansion, especially in unnecessary lines of business and in speculation.

"The exports continued extremely heavy up to the end of the year, resulting in a trade balance of substantially four billion dollars in the year 1919

Foreign Exchange.

"The great demoralization which had developed in foreign exchange it was felt would form a great obstacle to a continuation indefinitely of our large exports, and this opinion has been verified by subsequent events. The year 1919 closed with our industrial plants stimulated by post-war conditions to a degree of peace time activity unparalleled in the economic history of the country, and never was the Christmas trade so enormous and accompanied with such extravagance.

"During the winter months there was a continuation of the heavy trade demands, greater shortage of manufactured goods, and difficulty in securing same, and while there was apparently evidence of greater prosperity than ever before bankers began to note shortened lending power, less easy credits, more difficulty in securing same, and dangers of various kinds developing, all growing out of the extravagance, the over-trading, and the excessive bidding up of prices. Continuous rise in prices and inflation of credit was arousing more and more anxiety in foreign countries as well as in America.

"Business in the Spring months showed a continuation of great activity in many districts, with higher levels of prices, wages moving to a still higher level, and this being accompanied by high rates for credit. A severe railroad strike assumed national proportions and tended to a congestion of products and manifested the lack of transportation facilities.

Raising of Federal Reserve Rates.

"One of the most important events of the early Summer was the raising still further of the Federal Reserve Bank rates to 7 per cent on commercial paper,

and in four of the Federal Reserve districts the adoption of the progressive discount rate, the rates increasing according as each individual bank increased its loan beyond certain fixed limits.

"Railroad congestion reached its peak in May and this congestion interfered with the normal process of marketing, thus tying up credit and making more difficult the carrying on of general business.

"Then began the inevitable collapse in inflated prices. First of silk from about \$19.00 per pound to \$8.00, followed by leather, wool, sugar, cotton, and other commodities, all evidencing the beginning of the deflation which had been forecast. Accompanying this abrupt drop in the price of some basic commodities were the evidences on every side of the immense amount of profiteering that had been going on, of the speculative stocks which have been held, of the propaganda which had been put forth by speculators holding stocks for higher prices, all to perpetuate an era of high prices, but in those lines where prices had reached such a point that the public would no longer pay the price it became a question merely of time before the law of supply and demand would assert itself and bring about the needed reforms.

"As the demands for credit throughout the Spring and early Summer months continued to increase the Secretary of the Treasury deemed it necessary to establish a governmental rate on its borrowings of 6 per cent, which was soon reflected in the commercial paper market in rates of 8 per cent to 10 per cent.

Credit Strain Result of War.

"Our credit strain is a natural result of the world war which imposed upon the nations of the world an aggregate debt now estimated at 265 billion dollars compared with a debt of forty-four billion at the beginning of the war. This imposes an interest charge on the nations of the world of something like nine to ten billion dollars, or, in other words, a per capita indebtedness of \$150 per person. This strained credit condition was also due to the extravagance of the people and the money they have been spending for luxuries, the amount of which has been estimated by the Secretary of the Treasury, based on the income tax on such luxuries, of 22 billion dollars, divided among various articles, such as 50 million for chewing gum, 750 millions for face powders and perfumery, 500 millions for jewelry, 250 millions for ice cream, 800 million dollars for cigarettes, over a billion dollars for candy, and so on. To settle for this orgy of war expenditures, credit strain, etc., the people must pay the price, i. e., heavy taxes for several years.

Necessity for Increased Production.

"The necessity for increased production has been constantly pointed out during the past year by economists, but the claim has been made that the curtailment of credit would interfere with production. While this may have been the case to a certain extent it should be noted that, with the great increase of banking loans, which began a year or so ago and increased steadily, it did not result in an increase of production. Production depends on labor as well as on credit, and production can go on, when conditions are settled, at one level of prices as well as another but credit should not be extended on the basis

of the rise in prices but in relation to the amount of reserves behind the credit.

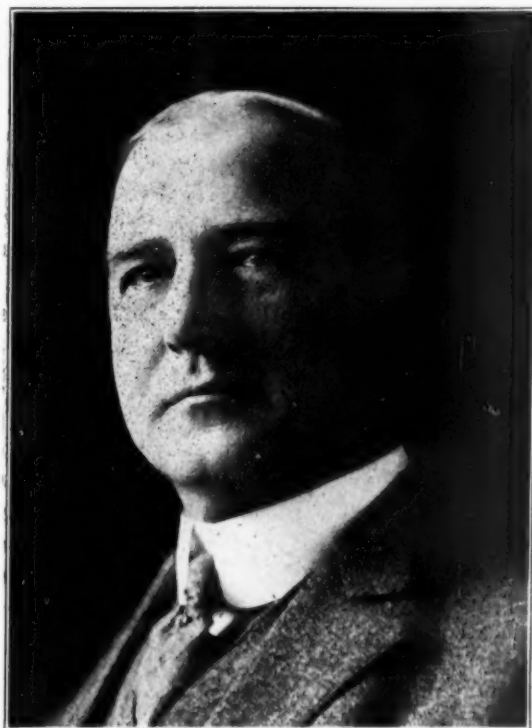
Importance of Adequate Transportation.

"Our economic development and prosperity in the next few years depends upon the railroads being brought up to their required standard and to the increase in our transportation facilities.

Question of Immigration.

Connected with the transportation problem is the question of production as they are so closely related. One of the most essential things is man power and his labor. Labor must be shifted into the essential industries, women must be more generally employed, or we must draw immigrants from other countries who are willing to dig and do other heavy work, or our production will necessarily be curtailed.

It is encouraging to note the wave of immigration now moving toward the United States and if the present rate is kept up it will result in one million immi-



A. H. Nichols, Executive Committee, National Hardware Association of the United States.

grants for the year 1921. Lack of shipping and transportation facilities and the difficulties in the path of the departing immigrant from central Europe has prevented a greater exodus to the United States. While this influx of labor may not affect immediately a great reduction of the wage scale of manual labor it will result in securing a full day's work from those employed.

The Beginnings of Deflation.

"The 'deflation' which for months has been predicted as necessary to a return to more normal conditions is now under way, and the movement in some directions seems drastic. The deflation of prices of farm products since July 15th has been almost dramatic in its swiftness. The value of this year's crops of cotton, wheat and corn compared with their dollar worth July 15th has fallen about 3½ billion dollars, and during the month of September, taking twelve basic commodities, including grains, metal, coal, lum-

ber, sugar, etc., there has been a decline of over 11 per cent in the index figures, which is probably the heaviest decline recorded in the last twenty years in a similar period. This decline is in the face of an actual volume of trade and movement of goods in the month of September, as evidenced by the volume of car loadings and the figures for bank clearings outside of New York City, which shows it to be a record month. Some find it difficult to understand this record volume of business at a time of such marked price declines, but it is to be noted that just such a condition as this usually precedes a drastic contraction in trade.

Retailers Also Subject to Effect of Deflation.

"The readjustment process will not be accomplished until retail distributors go through practically the same experience as the producer of raw materials and the manufacturer has done, and as yet the reduction in prices has not reached the ultimate consumer except in a few lines. Eventually it must do so, but it is natural that the retailer should try to maintain high prices so long as he has high cost merchandise to sell, if competition will permit him to do so. In any event, we can expect the present general level of retail prices will be maintained possibly throughout the balance of this year, but the consuming public should begin to feel the effects of the drop in prices by next Spring or Summer, in a more marked degree.

Will Lead to Sound Business Conditions.

"The readjustment now going on is our greatest assurance of sound business conditions after a short period. If we have a reasonable deflation in an orderly way it is the surest preventive of a collapse and will prove a positive benefit to the business situation. Speculative hoarders of goods have been compelled to liquidate, the unrest of labor has been, to a certain extent, overcome, and the cost of living will soon be lowered. The prices of certain commodities have about reached their lowest point on the present movement and there may be some recovery. Other industries must expect to contribute their share. Certain it is that those who are working to longer maintain the high priced orgy to continue will be disappointed. In an onward movement like the present it is always difficult to determine how far the reaction will go before confidence is reaffirmed. It certainly should not be expected that the average of prices may slump back to anything like pre-war figures for some time to come. It required thirteen years after the Civil War for prices to get back to the starting point, and it is to be hoped and expected that there will be a gradual rather than an abrupt decline during the next few years.

No Cause for Pessimism.

"We must acknowledge that at the moment there are many adverse factors at work which are depressing, but there is no reason for frenzy or undue alarm over the present conditions, which represent a perfectly natural evolution.

"Let us consider some of the favorable factors in the situation:

"So long as European conditions continue unsettled it will affect our economic position, but apparently order has succeeded chaos and will ultimately prevail. Europe must have our products, especially raw materials, in quantities.

"We will hold a part at last of the new export business which we have developed during the war period. We will have a rush of immigration, which will furnish us with cheap labor, thus helping in reducing production costs.

"We are assured of the largest crop returns in our history. While the wheat crop is much lower than last year the United States Crop Report of October 8th shows the corn yield to be larger by 90 million bushels than any previous yield, and 300 million bushels over last year. Oats are 200 million bushels more than a year ago, and tobacco 90 million pounds larger than a year ago, and although they will be marketed at lower prices than prevailed last year the value of the crops will probably be close to 20 billions, thus insuring a large purchasing power in the agricultural districts.

"Domestic and retail trade will probably continue good; certainly until after the Christmas trade is over.

"While in industrial centers labor will not be as well employed as formerly, nor wages probably as high in many sections, all kinds of labor will be in demand and at high wages for some time to come, with the accompanying purchasing power.

"The strained credit conditions of the past few months will be succeeded by an easier situation soon, as the demands for crop moving are nearly satisfied. After the first of the year, if not before, interest rates will be lower and credit more easily obtained.

"If the price of building material recedes somewhat, as is now probable, during the spring months, we should have an era of pronounced building activity as the country needs a building era to supply the birth, especially of houses. This should afford work at fair wages for many wage earners and keep prosperous, though at lower prices, dealers in building materials.

"Confidence which has been shaken will probably be restored after election is over, and business will then begin to settle down on a sounder basis.

"In many lines there is so great a scarcity of goods that it will take a long time to supply same, but we must expect it to be at a lower price level.

"We will undoubtedly work through new paths in our business development of the next generation. It is possible that we must expect more government control of certain kinds of business in the public interest. This is not a new development because history reveals that two or three centuries ago business was generally interpreted as being of public interest rather than private. 'Service to the public' is now a common motto. This means that business should recognize that to be of service 'it must supply the reasonable wants of the public continually with a standardized product that can be depended on year in and year out.'

"May I speak of the importance of our maintaining a high standard of business ethics in such questions as honoring contracts even if at a loss, not returning goods unless under agreement and the cancellation of orders? There has been buying beyond needs, there has been buying for speculation, men have misjudged the time in which the decline of prices would come, thus continuing to buy beyond their needs, and now, when the reaction has begun, many have

tried to pass the burden of carrying the losses to the 'other fellow.' This is a time which calls for the display of common honesty, fair dealing, and to show a willingness to absorb a certain amount of the losses now entailed by declines, in view of the large profits which have been made during the past years.

"The manufacturers and distributors owe a duty to the public to produce the goods needed, to have distribution made in the most economical and serviceable way, and to have business conducted on the basis of giving to each and every man his just due; no more, no less.

"The present situation calls for faith in one's country, courage to act, the practice of economy both in individual and community life, willingness to labor to the fullest extent in the most efficient way, and with faith in God we can move forward to better and higher things without fear."

Following a scholarly address by Dr. Russell H. Conwell came a brief talk on "General Business Conditions" by Major Frederick H. Payne, President American Hardware Manufacturers' Association, who spoke as follows:

Address by Major Frederick H. Payne, President American Hardware Manufacturers' Association, to Open Session of National Hardware Association, October 20, 1920, in Atlantic City, New Jersey.

"It is the belief in New York and other financial centers that the peak of the credit strain has been reached and that money will begin to flow back to the financial centers very soon, and I predict that both time and call money will be cheaper in 1921.

Inventories and Price Reductions.

"The rapid declines in raw materials, first of fur, silk and wool, followed by leather, rubber and cotton, resulting in price cuts in finished goods during the past few weeks, have given rise to some concern among those carrying large inventories accumulated before the decline set in. There is no question but what in many lines the writing down of inventories must be done on or before December 31st, and it is bound to be a painful and costly operation.

"The steel industry has been affected least of any, although every industry must go through more or less liquidation before we can look for a large volume of business.

Deflation Is Relative.

"Manufacturers of lines that have made the largest advances during the past two or three years will naturally have the farthest to fall. Manufacturers that have not raised their prices more than the actual cost of the raw material and labor, will make no change until conditions warrant.

"Take, for example, the automobile industry. The companies that advanced their prices only enough to cover the increase in raw material and labor have made no reduction, while those that had advanced a large percentage over pre-war prices have made a substantial reduction.

Wages Will Share in Decline.

"During the past few weeks we have had a steady deflation. Securities listed on the various exchanges were first to be liquidated at the present time merchandise is going through the same operation; labor

will also have to take its turn, although possibly not to any great extent until the cost of living has actually been reduced.

"The other side of the picture are the tremendous crops that are being harvested, which are really the backbone of the country. I believe as soon as business in this country has been thoroughly liquidated, that we will have at least five years of the greatest prosperity this country has ever seen.

Sane Prices Are Imperative.

"When all is said and done, however, it is about time for America to consider sane prices for rent, clothing, food and commodities; sane hours for a day's labor; sane pay for same; sane spending and sane living; and in brief, to come back to earth again."

The Wednesday afternoon session of the National Hardware Association of the United States was devoted to various reports and discussions.

The report of Secretary-Treasurer T. James Fernley, gave a concise review of the work accomplished by the Association and indicated the chief difficulties which remain to be overcome. Its main paragraphs are as follows:

Report of T. James Fernley, Secretary-Treasurer, The National Hardware Association of the United States to the Twenty-Sixth Annual Convention, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 20, 1920.

"The Twenty-sixth year of our Association's existence has been one of active participation in the problems caused by the abnormal conditions of industry and finance prevailing.

Inadequate Differentials.

"The Association has continued to draw to the attention of manufacturers who suggest the prices at which their products are to be resold, the necessity for an adequate differential for their wholesale distributors.

"Many manufacturers using national advertising in attempting to create a widespread consumer demand for their goods, overlook the necessity of providing an adequate differential for wholesale and retail distributors in order that the distribution of the goods should be conducted at a small net profit for such distributors instead of at a loss.

Season Datings.

"During the war many manufacturers of seasonable goods withdrew datings, largely because unusual demand produced competition for the merchandise by the buyers instead of competition among the sellers for the trade of the buyers.

"Season datings are necessary, as the manufacturer to operate his plant in an efficient manner must secure definite orders and specifications months before the goods are needed by the trade. The wholesaler and the retailer are not willing to order, receive, pay for, store, and insure such material unless there is an inducement to do so.

"Therefore, to secure orders and to plan the production of the finished goods, the manufacturer of seasonable goods, is faced with the inevitable necessity of making suitable datings to cover the time when his goods will be called for by the trade.

Price Ruling at Date of Shipment.

"Surely the manufacturers who insisted that the wholesaler must pay the price ruling at date of shipment, which was generally a higher price than the price named when the order was taken, will be willing to continue the policy on a downward market giving the buyer the benefit of lower price ruling at date of shipment.

"Many wholesalers protested that the placing of orders subject to price ruling at date of shipment was giving the seller a signed check with the amount left blank and from communications received from our members it was apparent that the system could not continue.

Price Guarantees.

"Manufacturers anxious to keep their plants running should guarantee their prices to the wholesale distributors, otherwise the wholesaler will refrain from purchasing, except for immediate needs, until the market is in a stable condition.

Through price guarantees, manufacturers can keep their labor forces intact and their factories running and the distributors can keep average stocks on hand.

The Chain Store Method of Distribution.

"This plan of hardware chain stores for many reasons, has failed to materialize into a proposition of any size and it is to be expected that within the next few years, the promoters will be convinced that the distribution of hardware differs in many particulars from drugs, groceries and tobacco.

Financial Conditions.

"The Association has issued several pertinent statements by President Treman regarding financial and merchandise conditions.

"At the request of the Executive Committee in May, a statement was prepared by President Treman stating very clearly the financial conditions which probably would prevail during the summer and there is no doubt but that the warning then given was of value to our members in making such arrangements as later proved necessary.

The Position of the Wholesaler.

"With the average value of hardware and kindred lines 172 per cent above the level existing January 1, 1915, the position of the wholesaler in financing stock on hand in warehouse, the enormous quantity of goods en route from factories (delayed in some cases for months through transportation difficulties) together with customers' accounts, has been very difficult, but the wholesale distributors of the country have continued without complaint.

Interest on Past Due Accounts.

"The unusual financial conditions prevailing during the past few months, has induced a number of houses not previously charging and collecting interest on past due accounts, to inaugurate this practice.

"As a general rule the interest charged is a little above the rate charged by banks in the locality of the distributor as it is not the desire of our members to have their customers use them as bankers any more than is absolutely necessary.

Automobile Accessories Branch.

"Your Automobile Accessories Branch has con-

tinued to grow in numbers and influence under the chairmanship of Mr. A. H. Nichols.

"Figures collected by the Association indicate that since the formation of the Accessories Branch, the volume of automobile accessories, supplies and equipment handled by the members of our Association has increased from eight million dollars in 1916 to over fifty-five million dollars in 1919.

"A number of the evil conditions formerly existing in the accessories business has completely disappeared and others are slowly and gradually being eradicated.

The Metal Branch.

"The Metal Branch under the guidance of Chairman Donlevy has endeavored in numerous directions to assist in maintaining satisfactory distributing conditions in sheet metals, tin plate, and other products handled by the members.



W. H. Donlevy, Executive Committee, National Hardware Association of the United States.

"Market conditions have been absolutely unprecedented and highly complex owing to a situation making necessary the payment of premiums of from 20 per cent to 50 per cent over the prices of other sellers in order to secure material.

National Retail Hardware Association.

"President Treman and your Secretary attended the Twenty-first Congress of the National Retail Hardware Association in Buffalo. It is pleasing to report that this organization, under the leadership of its very able President, Mr. Matthias Ludlow, and its efficient Secretary, Mr. Herbert P. Sheets, is conducting its activities along broad constructive lines which should be of inestimable value to the retailers of the country.

Federal Taxation.

"It is desired that the members at this convention express themselves on the subject of a protest against present burdensome and inequitable measures of taxation of the Federal Government.

"Ample assurance has been given by Senators, Congressmen and other Government officials that the excess profits tax was strictly a war measure and the

members will be requested to express themselves with a view to the desirability of its prompt repeal and of the substitution therefore of other methods more accurate and fair to the business interest.

"President Treman has devoted much time and thought to the work of the Association, very carefully and thoroughly considering all suggestions and propositions, issuing such instruction as he deemed necessary for the protection and promotion of the interests of the membership.

"The members of the Executive Committee and the Advisory Board have given freely of their time to the many matters requiring their attention during the past year—meetings being held in Chicago last December, in Atlantic City in May and here in Atlantic City immediately preceding this Convention.

"The Secretary's office wishes to thank the members for actively cooperating during the past Association year in the many matters requiring their attention and action."

Following the able report of Secretary-Treasurer T. James Fernley, came a discussion of several of the topics treated in his address.

Then the report of the Executive Committee was presented and comment made on its main features by various members in attendance.

John M. Townley, of Townley Metal and Hardware Company, Kansas City, Missouri, Chairman of the Overhead Expense Committee, delivered the report of that body to the convention.

The members from various sections of the country were called upon by President Treman for expressions of opinion regarding the minimum differential which should be allowed wholesale distributors by manufacturers' recommending a resale price.

The question of the continuance of the present level of prices and the probability and nature of changes which are likely to occur constituted the subject matter of brief talks by several members.

The session adjourned at 4:45 p. m. after the appointment of the Nominating Committee and the Committee on Resolutions.

Thursday, October 21, 1920.

Thursday morning's session of the Hardware Jobbers was devoted to addresses by manufacturers on the situation in their respective lines.

The nail and wire situation was analyzed by J. G. Deericks, of Pittsburgh Steel Company, Pittsburgh, Pennsylvania.

Charles F. Rockwell, of The Miller Brothers Cutlery Company, Meriden, Connecticut, reviewed conditions in the cutlery trade and called attention to the likelihood of a continuance of the shortage in cutlery supplies. He declared that the output of the American cutlery manufacturers has not yet reached a stage of production where it equals the demand.

Electrical appliances as they affect the hardware trade of the country were explained by A. G. Kimball, of Landers, Frary and Clark, New Britain, Connecticut.

Not being in the list of luxuries or of articles which can easily be dispensed with, safety razors are a staple commodity for which there is a constant market.

C. J. Oxley, of the Auto Strop Safety Razor Com-

pany, New York City, gave an optimistic estimate of the general condition regarding these products.

The certainty of big crops in practically every part of the country and the consequent strengthening of the purchasing power of the farmer justifies the inference that there will be no appreciable slump in the agricultural tools situation. This matter was ably discussed by Robert H. Cowdery, The American Fork and Hoe Company, Cleveland, Ohio.

MEETING OF THE METAL BRANCH OF THE NATIONAL
HARDWARE ASSOCIATION OF THE UNITED
STATES, THURSDAY AFTERNOON,
OCTOBER 21, 1920.

At the meeting of the Metal Branch of the National Hardware Association, Thursday afternoon, October 21st, George Smart, one of the editors of *The Iron Age*, read a paper on "The General Iron and Steel Situation."

He said that the past few years have been the most memorable in the history of the iron industry.

Important as was the part taken by iron in the Civil War, when the life of the Union was threatened, it was not as important as that of the great World War, when civilization itself was in danger, for in recent years, as never before, iron has been a decisive factor in warfare.

Mr. Smart reviewed the period from 1907 to 1914 and then discussed the Year of Prostration, 1914; the Year of Recovery, 1915; the Year of Prosperity, 1916 the Year of Prosperity Continued, 1917; the Year of Prodigious War Effort, 1918; the Year of Troubles, 1919, and finally the Beginning of Readjustment, 1920. In conclusion he spoke as follows:

**Synopsis of Address on "The General Iron and Steel Situation," by George Smart, Editor of *The Iron Age*,
Delivered at the Convention of the National Hardware Association of the United States in Atlantic City, New Jersey, October 21, 1920.**

"After three and a half years of tremendous war effort, it was expected that 1919 would be a period of readjustment. This turned out to be true to some extent, but there were troubles so many and of so serious a nature, that less was accomplished in the way of laying a foundation for peace time than would have been done under more favorable conditions.

"There were many controversies over steel prices, and the steel strike, which began September 22 and lasted into December, reduced output of steel, in conjunction with the soft coal strike, more than 2,200,000 ton.

"A committee of steel manufacturers, appointed at a meeting called by President Gary of the American Iron and Steel Institute, met the Industrial Board at Washington on March 19 and on the afternoon of March 20, the Board announced reduced prices of iron and steel ranging from \$4.25 per ton on pig iron and \$5 on billets to \$10 on standard rails and \$7 net ton for plates, shapes, bars, wrought pipe, sheets, tin plate, \$5 on wire, wire nails, hoops and light rails.

"A moderate amount of new business developed early in April. The plan was given a serious blow by the refusal of the Railroad Administration to pay for rails at prices announced on March 20, which were \$45 for Bessemer and \$47 for open hearth.

"The controversy which followed the conference,

continued between the Railroad Administration and Industrial Board for several weeks. Finally the members of the board resigned and on May 9 all efforts for price stabilization were abandoned.

Price Policy of Steel Corporation.

"The Steel Corporation's policy in regard to iron and steel prices, was a feature of the year after March 21. In the second half of the year, when it became plain that the steel which could be rolled before January 1, 1920, would fall far short of meeting deliveries due on 1919 contracts, the Steel Corporation rigidly adhered to the prices of March 21 and continued to do so throughout the rest of the year and through all of 1920.

"Never in the history of the iron trade has there been such a spectacle of wide divergence of prices between companies for such a long period. Not only was there the wide difference between Steel Corporation prices and those of the independents, so called, but among the independents catering to prompt delivery trade and these selling for deferred deliveries there were also wide differences.

"Some independent producers followed the same policy. Owing to the steel strike and fuel scarcity, they had large deliveries to make, but other companies which were not booked far ahead, began to charge higher prices.

Sheets Were at a Premium.

"Sheets were particularly hard to get and offers of \$30 a ton above the March 21 level were made by automobile companies.

"Pig iron prices did not advance very much until after the steel strike was inaugurated. As that strike waned, the coal strike came on, and it was clear that the production of pig iron would not equal the demand. Consumers were eager to buy and prices advanced rapidly. The year closed with an exceedingly strong market.

"The great event of the year was the defeat of the steel strike under the leadership of the notorious William Z. Foster, syndicalist. It was a year of defeat for labor autocracy.

The Beginning of Readjustment—1920.

"The readjustment which it had been expected would take place in 1919 was postponed, and indications of real readjustment did not appear to any marked degree until September and October, 1920, when under the leadership of Henry Ford, a number of automobile companies made substantial reductions in the prices of their cars and attempted to obtain revisions of contracts for iron and steel products.

"It was estimated that prices of commodities declined 6 per cent during September and authorities agreed that the decline up to the beginning of October, was larger than any decline in American staple prices during a corresponding period since the panic of 1893.

"In some periods of the past, such a rapid shrinkage of staple values, would probably have brought panic, but nothing approaching a panic has occurred, or is likely to be experienced.

"While the decline in many other products has been rapid, iron and steel have shown considerable ability to resist downward tendency.

"Prices of finished materials show little change, except that premiums on sheets and plates have disap-

peared. Old material has declined, but a rather remarkable fact is that coke prices are as high as they were September 1, being \$17 for prompt furnace coke compared with \$4.85 a year ago, and \$18 for prompt foundry coke, compared with \$5.50 a year ago.

How Far Will Prices Decline?

"Naturally the question arises, how far will prices descend and what will be the extent of the depression which is likely to ensue? Charts showing fluctuations for the past few years indicate that prices are now far above those of the pre-war period, as for example, steel bars, which were selling for \$22 a net ton in January, 1915, are now being sold by the Steel Corporation at \$47 and by the independents at \$65.

"While, of course, it is true that prices are not fixed by costs but by the law of supply and demand, it is reasonable to expect that many manufacturers, rather than sell below cost, will close their plants.

"Coming back to the primary supplies, it does not seem probable that there will be any reduction in prices of ore. Prominent Lake Superior ore producers have been of the opinion that an advance of \$1.00 per ton would be necessary to fix increased costs. As to coke, the strength of the market has been surprising for a number of weeks.

"There has been a strong suspicion that, it has been maintained by cooperation of certain interests and it is not at all probable that present high prices of coal and coke will continue indefinitely.

Lower Prices Expected on Pig Iron.

"It is likely, therefore, that pig iron costs will be decreased and lower prices on pig iron can be expected. With lower price on pig iron, there will come lower quotations on finished materials, but it is hazardous to predict how low prices will go.

"It does not seem to me that the most important question is as to the extent of the decline in prices, but as to the ability to carry on business at a reasonable profit with a lower level of prices. The lowering of costs, will, of course, involve the readjustment of wages.

"This is a subject that manufacturers, as well as politicians, have been inclined to avoid, but nevertheless readjustment of wages are going on in a quiet way. The eight hour day, about which so much has been said, is coming into practice perhaps more rapidly than many of the wage-earners would desire—the real eight hour day, not the basic eight hour day of time and a half and double time for overtime.

"It is reasonable to hope that the orderly readjustment of wages will continue, but it must be done with great wisdom and a strong sense of justice on the part of the employers, if we are to avoid serious labor disturbances.

Moderate Wage Reductions Will Occur.

"Wage earners, will, I believe, accept moderate reductions in wages, if there is a corresponding reduction in the cost of living. If labor will increase its efficiency as it could easily do, the reduction in the rate of wages will not be large.

"Assuming, then, there will be a reduction in wages and in other costs, we need have little fear of moderate reduction in prices; in fact, such reduction is to be

welcomed. It would be folly not to expect and prepare for lower prices.

Problems Still to Be Solved.

"A number of uncertainties confront us. The needs of the railroads are great, but to what extent they will be able to buy, is still a question. The agricultural implement trade hesitates and some cancellations have been received from it. The exchange situation is extremely bad and no man can predict when, or how, it will be remedied.

"The automobile industry gets more attention than it deserves because it does not consume much more than 10 per cent of the steel output of the country. Hence if the manufacture of automobiles were stopped entirely, it would not mean paralysis for the steel industry and the consequence would not be nearly so serious as if railroad buying should entirely cease, for the railroads consume about 30 per cent of the steel output of the country.

No Cause to Fear Panic.

"In spite, however, of the questions before us, there is no cause for fear of a panic or other serious financial disturbances. There is almost universal confidence that the Federal Reserve Bank System will be of great value in preventing such financial troubles as have visited the country in earlier years. But more important than this is the positive conviction that when prices do descend to what in the opinion of the average buyer, is a reasonable level, buying will be resumed and will continue very actively, so that the country will be assured a long period of prosperity.

The Political Situation.

"It behooves to have a keen realization of the seriousness of the problems that confront us and to remember that if the opportunity of the next President is not for honor, or glory or even power, but for duty and sacrifice, the business men of the country are also confronted by an opportunity for duty and sacrifice, such as they have never before had. We have all done much talking about the importance of having business men in politics.

"After March 4th next we shall have a business man in the White House. Let us stand by him. If you will pardon the personal reference, permit me to say that I have enjoyed some acquaintance with both of the candidates and frankly, I must say that it is difficult for me to think that either of them is of presidential stature.

"I should certainly hesitate to say that either of them is a great man, but perhaps the country has had enough of great men to last awhile and will be happier and more prosperous with an average American. The man who enters the White House next March, may prove to be great. However that may be, I am certain that Ohio, the state which gave to the country Presidents Grant, Benjamin Harrison, Hayes, Garfield and McKinley and Taft will not be disgraced by either Harding or Cox.

Real Helpfulness is Needed.

"Let us have less carping criticism and more real helpfulness for the man in the White House. Let us cultivate more respect for the great office, more love of country. I believe that regardless of who is elected on November 2, the photograph of the next president,

entwined with the Stars and Stripes, should be installed in every home in the land as a constant reminder that, no matter how we differ as to policies, we always put country above party."

Following the address of Mr. George Smart, came a talk by Richard L. Austin of the business outlook from the American standpoint.

An exceptionally clear and logical explanation of the factors which control price movements was given in the address of John C. Howell, of Brookmire Economic Service, Incorporated, New York City, the salient features of which are as follows:

Address on "Basic Factors That Control Price Movements, With Particular Reference to Iron and Steel Products," by John C. Howell of New York City, Before the Meeting of the Metal Branch National Hardware Association of the United States, October 21, 1920, in Atlantic City, New Jersey.

"The time has now come for the business world to quit chasing shadows and missing the substance, and get back to first principles. There may be pots of gold at the end of the rainbow but it will take real work to get them. The Ponzi swindle is but the usual aftermath to periods of reckless and extravagant spending, and the amazing number of victims makes one despair that the commonest intelligence will ever characterize the great mass of any people.

Period of Spending Is Ended.

"The frenzied period of spending is passed and a gradual return to saner times may be expected without undue disruption and but little disturbance of conservative business. There must come, however, willy-nilly, a more general recognition of the laws which control business affairs, a broader undersanding and more general application of those laws, and the steps by which this will be forced are already clearly defined.

"A return to saner and more stable conditions is inevitable, and in the period ahead only the well-informed will have sufficient power to rise above adverse conditions. Business can not escape the obligation of conformity to laws any more than social or civil organizations. It is for the purpose of pointing out the general laws that control business, the factors that control prices and the conclusion to which the present status of those factors leads, that I am here today.

General Laws Governing Business.

"The general laws which control business are called Economics, and their operation is seen in the production, distribution and marketing of goods and services. All business to be successful and stable must conform absolutely to the dictates of Economic Law. Interferences either by government restrictions, artificial shortages or speculative hoarding must, in the nature of things, be temporary and yield eventually to the immutability of the law of Supply and Demand. The free operation of this law will control the flow and quantities of goods, will provide distribution facilities, dictate and regulate prices, punish profiteers and reward conservative business.

Prices Are Effects of Supply and Demand.

"Prices in themselves are but the effects of this law in operation, and effects dissociated from causes are sure to lead to false conclusions and consequent trouble. Prices then are effects, not causes, a truism perhaps,

but a truth which should be borne in mind in these days when so much is heard about high prices. High prices are high prices only relatively, and, are, or are not high in obedience to the immutable laws which I shall here illustrate and discuss.

"When supplies of goods are short and demand is normal, as it usually is, prices rise. When supplies of goods are short and demand is abnormal, as it sometimes is, prices rise proportionately higher. When supplies of goods are plentiful, however, and demand is about normal, prices tend to fall. When supplies are plentiful and demand is subnormal, as it seldom is, goods become a drug on the market. This statement of principle in the last analysis covers the whole question of price movement.

Three Divisions of Basic Materials.

"The quantity of goods available for consumption at any given time can always be measured by the amount of basic raw materials which pass through manufacturing processes, and these basic materials may be grouped under three general headings.

"Group 1—*Mineral products*, such as iron, copper, lead, coal, clay products and cement. Pig iron production is one of the best indexes of business conditions taken by itself. From 1903 to 1912 the rate of normal growth in pig iron production in the United States amounted to 6 per cent compounded yearly. If this rate had been maintained through the period of the war the production in 1919 would have amounted to 44,200,000 tons; actual production in 1919, however, amounted only to 30,537,000 tons, a deficit of 13,663,000 tons, which represents a considerable shortage of this important basic metal. Production in 1920 up to and including September has been at the rate of 3,053,000 tons a month, indicating an outturn for the year of 36,636,000 tons, which is about 6,000,000 tons in excess of 1919 while somewhat below 1916, 1917 and 1918, and around 10,000,000 tons below the outturn that would have been if the rate of normal growth had been maintained.

"A real shortage of these commodities exists today, measured even by a normal demand, as with the exception of copper all other commodities are below their normal increases though some improvements in each has taken place through 1920.

"Group 2—*Animal products* such as wool, silk, hides and meat products generally. Wool production has about maintained its normal growth and at present the world's supply is more than adequate to meet the world's current requirements. The production of silk has been fairly well maintained up to a normal standard, as have hides and meat products for the most part. The factor in this group which has accounted for the rise in prices has not been the scarcity of raw materials, therefore, but an unusually heavy demand for manufactured products, coupled with great purchasing power and unusual difficulties in distribution.

"Group 3—*Vegetables or agricultural products* such as cotton, rubber, jute, the grains, herbs and roots, forest products, as lumber and paper. Cotton in the United States over the period 1890 to 1913 shows a rate of normal growth of $2\frac{1}{4}$ per cent, which if continued through the war would have produced 16,200,000 bales, as against an actual production of approxi-

mately 10,696,000 bales in 1919 or a deficit of approximately 5,500,000 bales. The cotton crop for 1920 will be in excess of the last five years, and combined with a better crop in India and a normal crop in Egypt should furnish sufficient raw cotton for the spinning capacity of the world through 1921 that is likely to be busy.

Factors of Law of Demand.

"We come now to the discussion of the factors which illustrate the law of Demand, and this law is illustrated under five general headings which cover the channels through which goods pass into ultimate consumption. These are given as follows without any regard to their ranking importance:

- "1—Government buying.
- "2—Railroad and public utility buying.
- "3—Building requirements.
- "4—Retail trade.

"1. *Government Buying.* The extent of government buying, not only of our own government but of foreign governments, through the war period is fairly well shown by the increase in the world's debts. In 1913 the national debts of the world approximated \$40,000,000,000, which in 1920 had grown to \$265,000,000,000. Our own government in the thirty months ending March, 1920, had collected in taxes and loans and spent a larger sum than in the previous fifty-five years. The purchasing power represented by the enormous debts of the world rapidly absorbed for war purposes all the reserve stocks of goods held in every country.

2. *Railroad and Public Utility Buying.* Through railroad buying large quantities of manufactured products go into consumption every year, and during the period of the government's operations a considerable amount of government expenditures should be charged to railroad and public utility operation and maintenance. As the government buying on railroad account has ceased with the railroads again under private management, these managements will now take up the burden of their own maintenance and expanding railroad buying will soon be an increasing factor in the markets for the materials so vital to their maintenance and efficiency.

"3. *Building requirements.* At the present time there is a potential shortage of housing in the country, approximating \$3,000,000,000. In normal times the yearly value of building constructed in the United States approximated \$700,000,000 per year, but the restricted period of the war when relatively little building was done has imposed this backlog of business upon the normal demand, which now makes the figure so high as to preclude all possibility of its being met except by an unusually heavy building program over a number of years. At present, however, the demand for building materials is not so urgent as the needs of the situation require, the building program being greatly restricted by high and uncertain costs and still more uncertain returns on capital invested; but the potential demand is so big and so likely to appear in the markets, especially if easier cost conditions should develop, as to constitute a factor of considerable weight in the consumption of materials entering into building construction.

4. *Retail Trade.* The fourth channel by which goods reach ultimate consumption is through retail trade. For the past year retail trade, supported by the enormous purchasing power of the general population, has been unusually heavy both in volume and value. At present, however, there are evidences that a considerable curtailment of retail trade has taken place, and I am disposed to believe that a deciding slowing up will characterize the movements of this agency through a period of impending liquidation.

"5. *Export Trade.* The fifth channel through which goods reach ultimate consumption is that of export trade, representing the demand of foreign buyers, which in the past five years has grown to record proportions. United States exports from 1890 to 1913 increased at the rate of $4\frac{3}{4}$ per cent per year, which at a normal rate in 1919 would have shown \$3,290,000,000, whereas the actual figures approximated \$8,000,000,000. This increase of \$4,700,000,000 represents for the most part an increase in value rather than an increase in volume, but some increase in volume must be considered as having taken place, probably at least equal to the normal growth.

"In addition to keeping informed as to the processes by which supplies of goods are obtained and the factors which measure the demand for those goods, some additional factors are extremely important and should be carefully appraised by business men in touch with market conditions and interested in the movements of business and prices.

"A. *Public Psychology.* The first of these—public psychology—while a difficult thing to properly appraise, is one of very great importance in determining business policies. We have seen this psychology in evidence in the reckless buying of the past year, and is in evidence today in its hesitation about maintaining markets at price levels which the operation of that psychology last year brought about.

"B. *Transportation.* Accurate information as to its capacity and equipment, its capabilities for rapid seasonal expansion, reserves of rolling stock, and its geographical distribution. Transportation, being the agency of distribution of goods always occupies a very prominent position on the economic stage. As a factor in price movements its potentialities were demonstrated last spring. This demonstration has served to open the eyes of public officials and business men generally to the need of ample financial help to the railroad and distribution companies in order to enable them to meet the heavy and increasing demands upon transportation facilities.

"C. *Financial Conditions.* Financial conditions should be carefully watched in determining a forward business policy, as to the loaning capacity of the banks, the periods of maturity allowed for loans, interest rates, foreign exchange and general credit conditions. Everybody knows that at the present time there is a considerable strain upon the banking resources of the country, and that there is a real shortage of available capital, not only for carrying on this country's industries but to enable us to take advantage of foreign opportunities.

"D. *Political Conditions.* Correct information as to legislative enactments, actual or proposed, tariff

changes and tax impositions, judicial decisions as to its bearing upon business, and stable government at home and abroad. Legislation always plays an important role in affecting general business in a direct and intimate way through the tariff, the tax laws, what is or is not in restraint of trade, fixation of prices, and arbitrary curtailment or absorption of production. Government interference in business is never wise with the possible exception of a national emergency, and is quite intolerable when the emergency has passed.

"E. Labor Conditions. The labor question has come to assume larger proportions in the economic problem than any of the others and present complexities not easy of solution. Labor demands, however, as above intimated are of two kinds; those due to essentially economic causes and those which are essentially political. It is a well established fact that a rise in labor wage rates always lags behind commodity prices in a rising market. They tend to remain high after commodity prices have declined. In a period of rising prices, usually occasioned by some great emergency, a shortage of or sharp competition for labor is brought about, and in the sense that labor is a commodity and scarce, the price therefor is forced upward according to the law of Supply and Demand, and the products of labor are forced still higher in consequence. On the other hand, it is much easier to bring about a decline in commodity price levels than to obtain a voluntary relinquishment of high wage rates on the part of the workers, and about the only remedy that has been found is by way of a business depression with its corollary of idle factories, closed mills, bread lines and soup kitchens, producing thereby an over-supply of workers and competition for jobs with an inevitably lower rate for services. In this process, however, few profit and most suffer. The liquidation that has developed in the last few months has, however, changed the belligerent attitude of labor to one of moderation, and many voluntary acceptances of reduced rates have been witnessed in the past few weeks.

"Where causes of labor unrest are essentially economic they can be and should be adjusted. It is a fallacy to say that labor's demands are the cause of high prices. It is very much the same as general prices, in that it is the effect rather than the cause, and the basis of justice here is found in the reasonable approximation of the worker's income with the increase in the cost of living. The cooperation and loyalty of labor must be brought about; efficiency must be improved, antagonism must be abandoned, and industrial differences harmonized. Instruction in elementary economics, by which the workers' part in production and the efficacy of production in solving his problem can be clearly shown and easily understood by the intelligence of the average American worker, will not only be an aid to the worker but an invaluable investment for the employer.

Preparing For a New Prosperity.

"The time has now come to take warning of the impending ebb, to avoid the certain dangers in the backward flow, and wreck on the rocks of high money rates, speculative hoarding and heavy inventories at high prices, by seeking, before the ebb grows rapid with accelerated speed, the deep water of low stocks of high priced goods and the largest possible amount of liquid

capital, assuring thereby a strong position by which the business man will be enabled to take advantage of the time when the ebb will cease and the flow will begin again, passing through liquidation to a new and sounder prosperity."

Condensed in the brief speech of R. L. McHale of David Lupton's Sons Company, Philadelphia, Pennsylvania, are all the essential facts regarding the use of zinc for conductor pipes and eaves trough.

Mr. McHale clearly and tersely indicated the things which must be done to make the employment of zinc durable and effective. His highly instructive address is herewith reproduced.

Address on "The Use of Zinc for Conductor Pipe and Eaves Trough," by R. L. McHale, Delivered to the Meeting of the Metal Branch of the National Hardware Association of the United States, October 21, in Atlantic City, New Jersey.

"I will start this discussion by assuming that you have had experiences in the past that make you doubtful of the qualities of zinc for roofing and kindred purposes. I know you to be thoroughly versed in the properties of the metals you distribute, so, therefore, will attempt to dispel these doubts relative to the durability of zinc itself, before we discuss its merits for conduct pipe, eaves trough, and the fittings for the same.

"There are gentlemen attending this meeting, men who in years gone by have sold zinc to sheet metal workers for roofing purposes with the firm conviction that they were marketing a product that was reliable and adapted to the uses to which it was to be put, only to find at a later date, that it had failed to show in actual service, the lasting qualities expected of it.

Reasons for Failure of Material.

"The reason for this failure was twofold. First: The manufacturers of sheet steel failed to inform the mechanic of its peculiarities and its limitations. The metal worker proceeded to fabricate and work it as he would galvanized steel, in consequence of which, failure more often than success, was the result. The responsibility for these failures rests entirely with the producers. They could have gathered much information from the European countries where zinc has been used successfully for roofing purposes for many years. This information if given wide distribution could have prevented many failures of zinc installations.

"The second reason for the troubles of the past is due to the brittleness of the zinc. This brittleness is caused by the impurities contained in ordinary commercial sheet zinc averaging about 2 per cent.

Lessons Taught by Past Failures.

"Now, then, what has been gained by the knowledge acquired through the failures of the past. How can you feel assured that these unpleasant conditions will not arise again, and what assurance have you that you can send forth your salesmen and encourage them to sell products made of zinc

"As there are two reasons for the troubles of the past there are two ways by which they may be overcome in the future.

"The first method is by education. This is being done in a general way by the American Zinc Institute, an association of all the manufacturers of zinc in this country. This body has prepared specifications to meet

all conditions that might arise in any type of roof construction. They will give assistance at any time to further the industry, gladly and willingly.

"The next step is for the rolling mills to furnish a zinc that is free of the elements that cause the brittleness in zinc. The most important of these elements is cadmium.

Zinc Lasts Much Longer Than Steel.

"In our particular field, we, the manufacturers of conductor pipe, eaves trough, elbows and other accessories, know there is a big demand for a product that can be sold at a nominal price, that will last a long time, and eliminate the replacements every two to five years that are necessary when these articles are made of galvanized steel. After careful investigation we are convinced that zinc will fill this longfelt want.

"You may ask why is it, if zinc will last so much longer than steel, that some manufacturer has not taken it up and advocated its use for spouting

"The answer is, that no manufacturer could depend upon the quality of the commercial sheet zinc that he



A. J. Bihler, Executive Committee, National Hardware Association of the United States.

could obtain. The percentage of waste through broken seams at the actual time of manufacture, was oftentimes increased by additional loss after the material was placed in the warehouse. You might store one hundred lengths of pipe today, the seams apparently perfect and return in a week or a month and find a large percentage of them cracked and the material totally unfit for sale. In cold weather zinc could not be worked at all unless it was heated and then with indifferent success.

"What reliance, therefore, can you place upon these products in the future? The answer to this question depends upon the purity of the metal from which they are made. Recently, a mine has been opened in New Jersey that is producing a zinc over 99.9 per cent pure. No other mine in this country can produce a zinc of equal purity, consequently the results obtained will depend upon the source of supply as this factor will

determine the purity of the metal and consequently its availability for the manufacture of pipe, trough, etc.

"The double lock on pipe is a severe test of the ductility of a metal; again the crimping of a conductor elbow where six thicknesses of metal overlap is an even more severe test. We have tested many pieces by these methods and found the percentage of waste much less than upon open-hearth steel, in fact it is negligible.

Superior Properties of Zinc.

"What are the properties of zinc that make it superior to iron or steel? When iron or steel come in contact with water oxidation, or rusting as it is commonly known, begins immediately and in a short time the material is entirely consumed. Water has no such effect upon zinc. The only result of such contact is a slight coating of carbonate of oxide, which dulls the brightness of the metal, does not affect its properties but on the other hand acts as a protection against the inroads of destructive gases.

"Zinc expands and contracts much more than steel or copper. Between the average winter and summer temperature a ten foot length of pipe is liable to expansion or contraction of one-quarter of an inch in a length. The expansion and contraction must be understood by the metal worker and must be taken care of in the erection of this material. To overcome it, all gutters should have slip joints and should be fitted tight in the summer and a trifle loose in the winter. The pipe and elbows should have tapered ends so that they will fit together easily, yet snugly. The slip joint gutter and tapered pipe, eliminate the need of soldering. It is not essential in this type of work.

How to Prevent Corrosion.

"When zinc and another metal such as steel or copper come in direct contact in the presence of water or an acid solution, corrosion is the result. This corrosion can be guarded against by using accessories such as gutter hangers and pipe fasteners that have been galvanized, for the erection of this material. Where zinc, and steel or copper must come together, asbestos cement should be used to separate the metals. For example: if you want to use a zinc conductor pipe on a house that has an ornamental wooden box gutter lined with tin roofing plate or galvanized steel, the outlet or drop, which should be made of the same material, should be covered with asbestos cement and the pipe slipped over the outlet. When the conductor pipe connects with a sewer the rim of the soil pipe should be coated with asbestos or portland cement. All other fittings, such as mitres, ends, drops, etc., should be made of zinc. When these points are observed the resulting job is entirely out of class of galvanized steel work. It will outlast the galvanized steel many times.

Zinc Is Uncommonly Durable.

"As to its actual life, we can only judge by installations that we have examined in our own country. All of these local installations have been up for a period of from ten to twenty-five years and at the present time show no sign of deterioration. Furthermore, they are delivering the goods under adverse conditions. All are connected with sewers, some on manufacturing

plants, others within a stone's throw of a railroad engine house that is constantly pouring forth sulphurous acid gases.

"In Europe there are many buildings that have had zinc roofs and downspouts for many years:

"The Church of St. Barthelemy at Liege, erected 1811,

"Gare du Nord, Brussels, 1846,

"Home of Colonel Bosch, Maestricht, 1829,

"Zoological Gardens at Anvers, 1852,

and many ordinary houses that have been up for twenty-five years or more. All of these— even the oldest—were in good condition, with few or no repairs.

"In conclusion, we believe that zinc merits the consideration of all high class jobbers for conductor pipe and eaves trough, and if the importance of erecting it properly is brought to the attention of the tinner and sheet metal worker using it, its success is assured.

"When one considers the first cost, which is approximately twice that of steel and the length of service that it will give, it is no doubt the most economical metal that can be used for the manufacture of these products."

At the conclusion of Mr. McHale's address, Chairman Donlevy called on representatives of the mills and distributors from different sections of the country for an expression on the sheet metal market conditions for the balance of 1920 and the first quarter of 1921.

The meeting then took up matters of unfinished business and other routine details, adjourning at 4:15 p. m.

Friday, October 22, 1920.

The report of the Auditing Committee was the first item on the schedule of the Friday morning session of the National Hardware Association of the United States.

The significance of the improvement of credit conditions was thoroughly explained by W. B. Munroe, of Supplee-Biddle Hardware Company, Philadelphia, Pennsylvania.

A general discussion then took place upon the practice of some buyers in waiting for goods before paying for them.

The convention was unanimous in favoring a change in the present system of income and excess profit taxes. Opinion, however, was divided as to the advisability of the proposed flat tax on all sales in preference to the present system of Federal taxes.

The Committee on Resolutions submitted a report which was unanimously adopted as fully representing the sentiment of the Convention of the National Hardware Association:

A resolution favoring the prompt repeal of the present unjust system of Income and Excess Profit Taxes.

A Resolution of Thanks was also adopted to Dr. Russell H. Conway, for his eloquent address to the Manufacturers and their Entertainment Committee; to "Tom" Usher and his collaborators, "Ned" Swift and "Bob" Jones for arranging the magnificent Chicago Hardware Special; to W. H. Donlevy and A. H.

Nichols for presiding at the Metal and Automobiles Accessories Branches; to ex-President Robert H. Treman and the Advisory and Executive Committees for their splendid guidance in the past year; to hotels for their hospitality.

Special thanks were voted to ex-President Treman for his advice and information regarding merchandise and financial conditions during the year.

The decision as to the date and place of the next Convention was left to the Executive Committee.

Following the report of the Resolutions Committee came the list of candidates suggested for election by the Nominating Committee. The members so presented for office by the Committee were elected, as follows:

President: A. H. DECATUR, of Decatur and Hopkins Company, Boston, Massachusetts;

First Vice-President: BRACE HAYDEN, of Dunham, Carrigan and Hayden Company, San Francisco, California;

Second Vice-President: F. A. HEITMANN of F. W. Heitmann Company, Houston, Texas;

Secretary-Treasurer: T. JAMES FERNLEY of Philadelphia, Pennsylvania.

Assistant Secretary-Treasurer: GEORGE A. FERNLEY of Philadelphia, Pennsylvania;

Executive Committee: C. A. JEWETT of George Worthington Company, Cleveland, Ohio; W. H. DONLEVY of Carter, Donlevy and Company, Philadelphia, Pennsylvania; W. S. KNAPP of Knapp and Spencer Company, Sioux City, Iowa; JOHN M. TOWNLEY of Townley Metal and Hardware Company, Kansas City, Missouri; H. S. DARBY of J. M. Warren and Company, Troy, New York; and A. H. NICHOLS of Buhl Sons Company, Detroit, Michigan.

With the exception of C. A. Jewett, who was chosen to take the place of F. A. Heitmann, all the foregoing members of the Executive Committee were reelected from the past term.

Brace Hayden was reelected First Vice-President and T. James Fernley reelected Secretary-Treasurer.

The convention of the National Hardware Association of the United States concluded with a series of talks on queries propounded through the Question Box. The topics presented were:

The percentage of mail orders to total sales. How can this be increased?

Methods of keeping records of stock, i. e., monthly calculations, quarterly inventories, perpetual inventories, etc.

Methods of handling orders in the house.

The expense of handling parcel post and express shipment.

Advantages accruing from the use of trade acceptances.

The expense of warehouse versus direct shipments.

Worthy of special mention is the strong optimism which characterized all the sessions of the convention. Not a single phrase was heard which might indicate lack of confidence in the future development of the business of our land. All were agreed that the period of readjustment through which we are now passing will be followed by many years of healthy prosperity.

Proportionate Decline of Wages and Prices Is Favored By Hardware Manufacturers' Convention.

Costs of Labor Must Be Adjusted in Order to Establish a Just and Reasonable Condition of Business.

The majority of the members of the American Hardware Manufacturers' Association are actuated by a national rather than a provincial conception of the purpose and function of business.

They realize that factories are as much a part of our civilization as schools and the fine arts of life.



Major Frederick H. Payne, Retiring President, American Hardware Manufacturers' Association.

They know, therefore, that practical economics are at the basis of comfort, progress, and culture.

In consequence, they approach their problems from the angle of the collective well-being of the people, rejecting the partisanship of class groupings in favor of the community at large.

It was with this comprehensive outlook that they carried on the deliberations of their convention in the Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 19, 20, and 21, 1920.

Not from motives of hostility toward their fellow citizens who are in their employ as workers, but because of a conviction of the fairness of such a procedure, they favored a proportionate decline of wages and prices in the effort to stabilize industry and thus insure a continuance of prosperity.

The Atlantic City Convention of the American Hardware Manufacturers' Association began with attendance in a body at the open session of the National Hardware Association. In the Blenheim Ballroom of the Marlborough-Blenheim Hotel, Wednesday morning, October 20th.

An account of that session is given in the story of the Hardware Jobbers' Convention elsewhere in this issue of AMERICAN ARTISAN AND HARDWARE RECORD.

After the opening prayer of Dr. Russell H. Con-

well, the annual address of President Treman of the jobbers, and a scholarly paper on "Hardware in Human Civilization" by Dr. Russell H. Conwell, a series of introductions took place.

Major Frederick H. Payne, President of the American Hardware Manufacturers' Association was presented to the assembly and spoke briefly.

Others introduced at the open session were:

F. D. Mitchell, Secretary-Treasurer American Hardware Manufacturers' Association.

George E. King, President Southern Hardware Jobbers' Association.

John Donnan, Secretary-Treasurer Southern Hardware Jobbers' Association.

Matthias Ludlow, President National Retail Hardware Association.

Herbert P. Sheets, Secretary-Treasurer National Retail Hardware Association.

Crannel Morgan, President National Supply and Machinery Dealers' Association.

E. J. McCarthy, President American Iron, Steel and Heavy Hardware Association.

A. H. Chamberlain, Secretary-Treasurer American Iron, Steel and Heavy Hardware Association.



W. D. Biggers, Newly Elected, American Hardware Manufacturers' Association.

At 2:30 o'clock Wednesday afternoon, October 20th, an executive session of the American Hardware Manufacturers' Association was held in the Blenheim West Solarium. It began with the address of Major Frederick H. Payne, the text of which is here-with reproduced:

The first executive session of the American Hardware Manufacturers' Association was held Wednesday afternoon, October 20th, at 2:30 o'clock in the Blenheim West Solarium of the Marlborough-Blenheim Hotel.

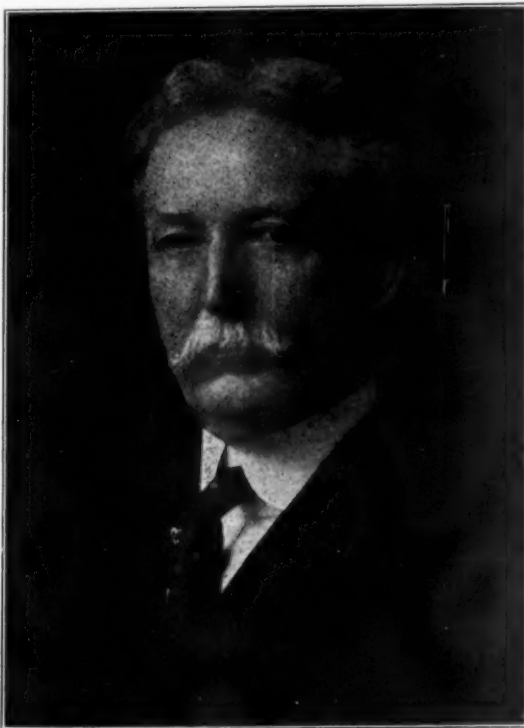
It began with the address of President Frederick H. Payne. It was a carefully studied analysis of present price conditions and a closely reasoned forecast of the fall in prices which we may expect in 1921.

Address of President Frederick H. Payne to First Executive Session of Convention of American Hardware Manufacturers' Association, October 20, 1920, in Atlantic City, New Jersey.

"It is well known that the real cause of the extraordinary decline in prices has been occasioned by, first, the consuming public reaching the limit of endurance as a result of the forcing up of prices for necessities, as well as the extremely rapid rise in the cost of rent. It is also caused, in a large measure, by the forced liquidation of loans through which merchandise had been carried by speculative merchants with the avowed purpose of bringing about still higher prices. Withdrawal of these credits necessitated sale to the highest bidder of tremendous amounts of all kinds of merchandise.

"Incidentally, many people who had themselves been living on credit were forced to retrench because of their speculative losses, and because of the denial of further bank loans to them.

"In numerous commodities, we shall probably see next year considerably higher prices than the low this season. Always in times like these the pendulum swings too far. Nobody is so foolish, however, as to



Robert W. Shanahan, Retiring Vice-President, American Hardware Manufacturers' Association.

expect to see the prices of last January and February again. After the Civil War, it was fourteen years before prices were back again at the pre-war average.

Steel Industry Is Most Stable of All.

"What we are all interested in is the steel industry, and there is no industry in the world that is as stable

today. There never was a time when mechanical tools were in such demand as they are today. The grave question, however, with practically every country, except our own, is: How are they going to pay for their purchases?

"As soon as the various lines have been thoroughly



Frederick D. Mitchell, Reelected Secretary-Treasurer, American Hardware Manufacturers' Association.

liquidated, you are going to find a very healthy demand for your goods, both in this country and abroad.

Advices Increase of Production.

"Some of you are more busy than others at the present moment. Those of you who are not, I believe it would be inadvisable to produce goods faster than the demand. The old saying 'never go clamming at high tide' is true at this time, as labor and materials are at their peak.

Exchange Is Unsatisfactory.

"The day is coming when we may decide to extend a reasonable credit to our customers abroad, but my advice is not to approach that conditions too rapidly. The rate of exchange is unsatisfactory with practically every country, and you, as manufacturers, cannot afford to gamble on the price of exchange six months or more from now. Extending of reasonable credit to old customers, of 30, 60, or possibly 90 days, is not out of order, but beyond that, go slow. The best way, if you have sold a customer abroad a large bill of goods is to take their acceptances payable monthly. In other words, get acceptances and don't run open accounts as it ties up too much of your capital.

Predicts Improved Credit Situation.

"Soon after the first of the year you are going to see the credit situation much improved and with cheaper money the demand for goods in this country will increase.

"English manufacturers at the present time are purchasing plants in Germany, and are sending over the raw material, and when the goods are manufactured will ship them to various countries for sale.

"There are no better diplomats in the world than the English, and there is no country that understands for-

eign trade as well as England. She gives the people of the world what they want, and does not try to sell them something she thinks they ought to have.

"America's excess of exports over imports for the eight months ended August 31st were \$1,500,000,000 less than for the same period in 1919, but most of it,



S. M. Stone, Executive Committee, American Hardware Manufacturers' Association.

however, was in consequence of the increase in imports from all the outside world, but notably from Europe, which in the first eight months of 1920 sent us \$527,000,000 more worth of merchandise than in the same months of 1919.

"Therefore, as fast as European industry gets on its feet again, its shipments of goods to the United States ought not to decrease, but to increase.

"That the import movement as a means of paying Europe's debts will be large, and that our export surplus will in general continue to decrease, is as certain in the long run as anything can be.

Forecasts Defeat of Bolshevism.

"Bolshevism in Russia will be overthrown this winter without a doubt, and the fifty-two Russian Jews who are pretending to control the situation will be turned out of office. They cannot ruin Russia because her wealth is in her land.

"I was talking with a very prominent Englishman recently. He told me that England today was not getting over 70 per cent of pre-war production. And you all know that pre-war production in England was a restricted production under Union rules.

"What the leaders of the unions fail to preach is that the cost of living can be reduced only by increased production through greater production and harder work on the part of everyone.

Is Opposed to Labor Unions.

"In my opinion, Unionism has struck twelve in this country. How any red-blooded American can belong to a Union is beyond belief. It is my opinion

that a large percentage of those who do belong, do so more out of fear than desire.

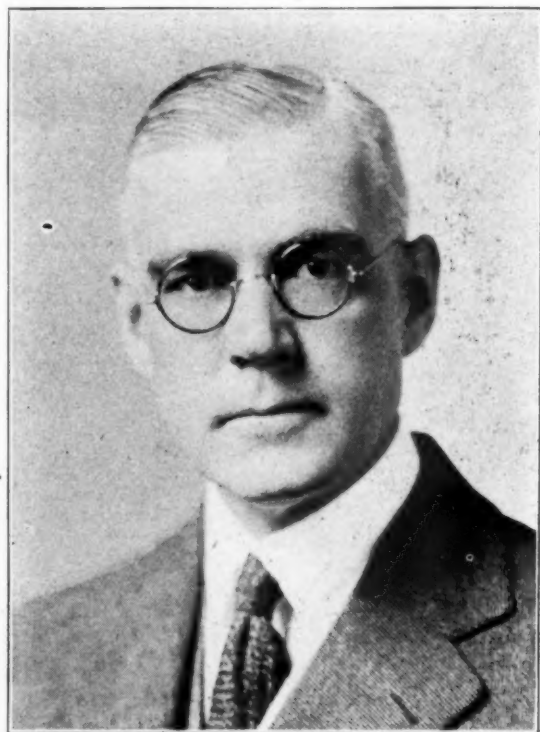
"It is the duty of every manufacturer in America to study the conditions in his own plant, and to see that the Industrial Relations are as near perfect as possible. 'Cleanliness and Sanitation' should be your watchword; that will give you better quality and increased production."

Fayette R. Plumb, ex-President of the American Hardware Manufacturers' Association, spoke on the subject of "Federal Taxation" and discussed the report of the Tax Committee of the National Industrial Conference Board.

He pointed out that the National Industrial Conference Board does not deem it advisable under present conditions to resort to any one of the several forms of a sales or turnover tax of general application which are being proposed. He said that the discussion now going on with reference to this tax bears a close resemblance to the arguments advanced on the same subject after the close of the Civil War. At that time the sales tax was at first received with general favor but eventually rejected after a careful study by the United States Revenue Commission.

Mr. Plumb called attention to the uncertainty from the business point of view as to whether or not the tax would be shifted. For example, questions naturally arise:

Could a merchant with an inventory upon which the prices were falling who was forced to realize cash upon it, shift such a tax? Could a maker of pig iron



B. H. Swift, Executive Committee, American Hardware Manufacturers' Association.

collect a tax from the steel manufacturer whose competitor made his own pig iron and, therefore, did not pay the tax? Could the manufacturer of shoes collect the tax from his wholesale customer, or could these wholesalers collect the tax from their retail customers in competition with the shoe manufacturer who did not

pay the tax because he sold his shoes directly to the public through his own retail stores?

Recounting the conclusions of the Tax Committee of the National Industrial Conference Board, Mr. Plumb presented the argument that whether the tax could be shifted or not, it would tend to encourage



Palmer W. Holmes, Membership Committee, American Hardware Manufacturers' Association.

changes in business practices which are not in harmony with the economic development of the country.

An unfair advantage would be obtained by an enterprise carrying on several consecutive processes in the manufacture or distribution of a commodity over other enterprises which were not so self-contained, due to the pyramiding effect of a sales tax at each turnover.

Finally, as Mr. Plumb observed, the objections to a sales tax at each turnover can not be met by substituting a tax on the sale of goods, wares, and merchandise at some one point such, for instance, as upon a final or retail sale for consumption and use.

In the evening of Wednesday, October 20th, a ball was given by the American Hardware Manufacturers' Association in the Blenheim Ball Room which proved to be a thoroughly enjoyable diversion.

Thursday, October 21, 1920.

An executive session of the American Hardware Manufacturers' Association took place Thursday afternoon in the Blenheim Ball Room.

The principal address of the afternoon was delivered by the Honorable George Wilder Cartwright of Los Angeles, California.

He took for his theme the somewhat enigmatical subject of "The World's Greatest Blunder."

At 2:45 p. m. a pleasant Card Party was given to the ladies in the Ohio Avenue Hall of the Blenheim and in the evening an "At Home" was held in the Blenheim Exchange.

Friday, October 22, 1920

The executive session of Friday morning began with the report of the Resolutions Committee, which dealt with the question of the compulsory adoption of

the metric system. The text of the resolution, approved by the Convention, is as follows:

"BE IT RESOLVED by the American Hardware Manufacturers' Association that we favor the maintenance of our present system of weights and measures in general use and express our opposition to proposed legislation which would make the metric system compulsory and prohibit the use of our present units.

The report of the Nominating Committee was accepted by the Convention and resulted in the election of the following officers for the ensuing term:

President: W. D. BIGGERS of the Continental Company, Detroit, Michigan;

Vice-Presidents: MURRAY SARGENT of Sargent and Company, New Haven, Connecticut; J. G. O'BRIEN of Caldwell Manufacturing Company, Rochester, New York; and ISAAC BLACK of Russell and Erwin Manufacturing Company, New Britain, Connecticut.

Secretary-Treasurer: FREDERICK D. MITCHELL;

Executive Committee: W. H. COWDERY of American Fork and Hoe Company, Cleveland, Ohio; S. M. STONE of Colt's Patent Fire Arms Manufacturing Company, Hartford, Connecticut; B. H. SWIFT of The Jackson Shear Company, Fremont, Ohio; W. A. GRAHAM of Wallingford Manufacturing Company, Wallingford, Vermont; CHARLES M. ROBERTS of U. S. Chain and Forge Company, Pittsburgh, Pennsylvania; ROBERT D. THOMPSON of Lufkin Rule Company, Saginaw, Michigan; JOSEPH M. HOTTEL of Delta File Company, Philadelphia, Pennsylvania; and H. SANBORN SMITH of Gulf States Steel Company, Birmingham, Alabama.



J. H. Robinson, Membership Committee, American Hardware Manufacturers' Association.

The retiring president, Major Frederick H. Payne, was added to the Advisory Board, which consists of ex-presidents of the American Hardware Manufacturers' Association.

It was the unmistakable consensus of the Convention that industry and commerce are certain to develop

greater proportions during the coming years and that there are ample reasons for advocating and practicing optimism in all our social and economic affairs.

Chicago Hardware Special Has Enjoyable Trip.

The Chicago Hardware Special, carrying nearly two hundred delegates, ladies and other guests, on a train of ten Pullmans, three dining cars and two baggage cars, left the New York Central Depot at Chicago Sunday, October 17th, at 10:25 a. m., for the Atlantic City Conventions.

It was surely a happy crowd that "Tom" Usher and his fellow members on the Arrangement Committee, "Ned" Swift and "Bob" Jones, guided on this wonderfully enjoyable trip, and everybody did his best to make everybody else have a good time.

One of the means employed for the promotion of fellowship was the separation of all married couples, once the train started, and as a result nobody had a chance to get lonesome or feel bored. All sorts of good-natured jokes were played, good stories told and it seemed as if the whole train load composed one great, big, happy family out for a good time.

Each lady was presented with a beautiful corsage bouquet of pink roses and lavender sweet peas and every passenger wore a fancy paper cap and carried fancy colored toy balloons and noise-making souvenirs. At the noonday luncheon on Sunday, each lady found a box of Snyder's chocolates at her plate, while the gentlemen were furnished with smokes to last them all day. Beautiful place cards of a distinctive character were used at the dinner tables and were carefully put away for a remembrance of the trip.

The special souvenir to the ladies from the Committee was a folding portfolio of leather containing a package of fine stationery, blotter and pencil, not only very useful but beautiful in workmanship.

Irving S. Kemp, the hustling salesman of the Vaughan & Bushnell Manufacturing Company, presented everybody with a "Redipoint Junior" pencil.

Miss Cohn, Manager of AMERICAN ARTISAN AND HARDWARE RECORD, had a number of the "unattached" gentlemen assist her in giving out souvenir tape measures.

The luncheon menu for Sunday follows:

Bisque of Tomato		Radishes
Sliced Cucumbers	Chicken Halibut Au Gratin, Shirley	
Roast Loin of Mutton, Red Currant Jelly		
Mashed Potatoes	New String Beans	
Combination Salad		
French Dressing		
Green Apple Pie		
Cheese and Toasted Crackers		
Tea	Coffee	Milk
		Cocoa

The following is the Dinner Menu for Sunday:

Fresh Crabmeat Cocktail		
Pepper Pot Biltmore		
Olives		Celery
Lake Superior Whitefish, Saute Meuniere		
Cucumbers		
Grilled Calf's Sweetbreads with Fresh Mushrooms		
Roast Milk-Fed Chicken, Au Cresson		
Mashed Potatoes	Cauliflower Au Gratin	
Lettuce and Tomato Salad		
French Dressing		
Individual Peach Pie		
Biscuit Tortoni		
Chili, Pimento or Olive Cream Cheese, Toasted Crackers		
Coffee		

The travelers boarded one of the great Hudson steamers at Albany, New York, Monday morning and thoroughly enjoyed the daylight ride down the beautiful river, arriving in New York just in time to make the transfer to their special train at Jersey City, on which a splendid dinner was served, as follows:

Celery	Olives
Chicken with Rice	
Boiled Halibut, Egg Sauce	
Spaghetti with Oysters	
Roast Leg of Lamb, Currant Jelly	
Browned Potatoes	June Peas
Rolls	Bread
Lettuce and Tomato, Mayonnaise	
Ice Cream	Wafers
Cheese	Crackers
Tea	Milk
	Coffee

The Arrangement Committee certainly covered itself with glory and many were the compliments showered on Messrs. Usher, Swift and Jones, who by their untiring efforts had made certain that the journey was such a thoroughly enjoyable affair. May they long live and continue in charge of the future Chicago Hardware Specials for ever so many years.

The hosts of the "Hardware Special" en route to the Atlantic City, New Jersey, conventions were as follows:

American Hardware Corporation of Chicago.
American Fork and Hoe Company, The.
AMERICAN ARTISAN AND HARDWARE RECORD.
American Chain Company, Incorporated.
American Saw and Manufacturing Company.
American Screw Company.
American Wire Fabrics Company.
American Sheet and Tin Plate Company.
Ames Shovel and Tool Company.
Arcade Manufacturing Company.
Atkins, E. C., and Company.
Bissell Carpet Sweeper Company.
Buffalo Sled Company.
Barney Moore Company.
Bonney Vise and Tool Works, Incorporated.
Clyde Cutlery Company.
Chicago Spring Butt Company.
Continental Company.
Columbian Rope Company.
Christy Company.
Dietz, R. E., Company.
Disston, Henry and Sons, Incorporated.
Eagle Lock Company.
Eclipse Manufacturing Company.
France Manufacturing Company.
Graham Nut Company.
Gates Rubber Company.
Greenlee Brothers and Company.
Horton Manufacturing Company.
Hunt, Helm, Ferris and Company.
Hardware Age, New York and Chicago.
Hart and Cooley Company, Incorporated.
Imperial Brass Manufacturing Company.
Jackson Shear Company.
Keystone Manufacturing Company.
Klauer Manufacturing Company.
Lovell Manufacturing Company.
Lawson Manufacturing Company.
Lakeside Foundry Company.
Lalancé Grosjean Manufacturing Company.
Milwaukee Corrugating Company.
McKinney Manufacturing Company.
Mason, Davis and Company, Scale Manufacturing.
Northwestern Barb Wire Company.
National Enameling and Stamping Company.
Oliver Iron and Steel Company.
Oneida Community, Limited.
Payson Manufacturing Company.
Pennsylvania Lawn Mower Works.
Plumb, Fayette R.
Peck, Stow and Wilcox Company.
Pittsburgh Steel Company.
Phoenix Horse Shoe Company.
Potter Manufacturing Company.
Russell and Erwin Manufacturing Company.
Reynolds Wire Company.
Reed and Prince Manufacturing Company.
Rome Manufacturing Company.
Richmond Cedar Works.
Rowntree, John T.

Rock Island Manufacturing Company.
 Surpless, Dunn and Company.
 Sargent and Company.
 Simonds Manufacturing Company.
 Scharlow Manufacturing Company.
 Stowell Company.
 Stanley Works of Illinois.
 Stanley Rule and Level Company.
 Sparks-Withington Company.
 Swan, James Company, The.
 Toledo Wheelbarrow Company.
 Union Carbide Sales Company.
 Vaughan and Bushnell Manufacturing Company.
 Washington Cutlery Company.
 Wood Shovel and Tool Company.
 Wiss, J. and Sons Shear Company.
 Wooster, F. G. Sales Company.
 Winchester Repeating Arms Company.
 Wabash Screen Door Company.
 Whitman and Barnes Manufacturing Company.
 Wiebusch and Hilger (Limited).
 Warner, H. E., Western Manager *Hardware Dealers' Magazine*.

Get Satisfactory Results From AMERICAN ARTISAN.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Kindly discontinue our advertisement and accept our thanks for the results which we have obtained through your classified columns. We surely feel deeply obligated to you.

Yours truly,

WAHLER BROTHERS.

Chicago, Illinois, October 18, 1920.

Make Customers Feel Free to Buy as They Please.

"There is one thing I like about shopping by mail," remarked Mrs. Armstrong to her neighbor Mrs. Swanson, "you can look and look through the big catalogues, you can compare samples from a dozen different places to your heart's content, and there's no one to act grouchy if you don't decide to buy."

"I know our merchants here in Gresham feel sore at me because I don't do more of my buying of them," replied Mrs. Swanson. "I send away for some things and two or three times a year I go up to the city for a day to shop. I know that I get a good many things away that I could buy just as cheaply here, and I really would prefer to leave what money I can in our own town, but do you know I dread to go into a store in Gresham unless I know to a certainty beforehand that they have just what I want."

"I know all our merchants here personally, and when I go into the store of any one of them and ask to see some article or kind of goods that I am thinking of purchasing, whatever they may show me I don't feel free to take it or let it alone as my own taste and judgment dictate. There is a restraint. I know that I am expected to buy, and that without taking the time to make comparison with what the others are offering. When I see something in a window that pleases me I go in and make a bee line for a counter and get it. But when it's something that I need to take time to consider, I really would rather go to the city stores where they don't know me, or else fall back on samples from the mail order houses."

"I feel just as you do on that point," said Mrs. Armstrong. "And I've noticed too that our mer-

chants in Gresham are very jealous of one another, they and their wives and families as well.

"Last spring I bought my suit at Anspach's and really felt quite a glow of local patriotism at leaving twenty-five good dollars in our home town instead of taking my money to the city.

"But the husband of my good friend and neighbor, Mrs. Murray, is also in the dry goods business, and I could see very plainly that Mrs. Murray felt hurt because I didn't buy at their store, seemingly not taking into consideration at all that I went to them before I went to Anspach's, and positively could find nothing in my size that pleased me or was at all becoming.

"So it goes. If I buy a skirt at Tremmil's, then Dora Anspach's business pride is wounded because I did not patronize them. It's just that way with all of them. By making careful selection, buying one article in one place and one in another, I presume I could get most of my things in Gresham, but so long as my acquaintances who are in business are bound to feel a little offended half the time anyway, I don't know but I may as well 'take the curse' of sending my money away and shop where I can do it impersonally."

"Shop where I can do it impersonally"—this expression is pregnant with meaning and one which small town dealers should weigh and consider.

The conversation given above throws light on an all too common condition that is entirely wrong and which ought to be remedied. Unquestionably it is one of the elements that go to make up the formidable whole of mail-order-house and large-city competition.

It applies with greatest force to that very large class of women who are quite sensitive in temperament, and are rather slow, careful, and a little hesitating in buying.

Do ladies in your town have the feeling that you are going to be grouchy if they look at your goods and do not determine to buy them?

If they have this feeling, haven't you given them occasion and cause for it? And if you want your possible customers to feel differently, won't it be necessary to change your own mental attitude somewhat?

How would it do to put it up to the women of your town somewhat like this:

"We want you to come in and see our goods. We don't expect you nor do we desire you to buy what does not exactly please you. Favor us by looking at what we have and we shan't feel sore if you don't buy. We shall feel sore if you ignore us and send your money out of town without first seeing what we are offering."

When you can get the ear of some woman who has been fighting shy of your store and who very likely has been sending away or going to some larger place to do her buying, explain to her that it wouldn't be reasonable of you to expect to make a sale with every showing of goods.

If she is willing to spend her time examining any portion of your stock in which she may be interested, you are more than willing to devote the time of some salesperson to showing her the articles.

Good salesmanship is selling goods that won't come back to customers that will.—Caxton.

Calls for Real Cooperation in Hardware Field.

One of the prominent guests at the Atlantic City Hardware Convention was Matthias Ludlow, Philadelphia, President of the National Retail Hardware Association.

Mr. Ludlow has for years been regarded as one of the most progressive and most successful men in the business, and his viewpoint of the present situation in the hardware field is of so great interest and the arguments he makes for better team work between manufacturers, wholesales and retailers of hardware are so strong that AMERICAN ARTISAN AND HARDWARE RECORD is glad to give space in this special issue to the following article prepared by him:

"The manufacturing, jobbing and retail interests of the hardware business have developed and grow independently of each other. Each separate group has organized itself, and under the loose, wasteful and almost shiftless methods of American life previous to the war, things proceed with no great dissatisfaction appearing anywhere. The manufacturer took little interest in the ultimate consumer or in the retailer, and was satisfied when goods left the factory. The jobber was interested only in his ability to turn his stock, and the retailer in many cases developed suspicion of manufacturer and jobber. This suspicion was pretty generally reciprocated between groups.

"In fact every representative of the great hardware business glued his eyes on his own personal records, advanced the handiest excuse for any kind of a trade complaint, and believed that he stood alone and his only concern consisted in watching his own buying and selling without regard for anybody else.

Unwilling to Sponsor Movement.

"It must be admitted that there were some advanced thinkers who talked about cooperation, but they were just individuals and only the bravest of them spoke out in meeting for fear of being called theorists. If they did speak out, as a few brave souls have done, they found no following, those who agreed with them being unwilling to shoulder the responsibility of starting something that looked like a forlorn hope. In any event the job looked so big that even enthusiasts sighed "What's the use," and left it for others to work on.

"Then came the war. All the trials and troubles of war restrictions have now become history, and with them we have no further concern. But they have left a legacy of complicated conditions, and we have to face them. The war provided lessons. Will we benefit by them

"The world is in debt, the social order is disturbed, and business is called upon to pay for the greatest destruction we have ever known. We can not go on as before the war, and now comes the question which seems so easily answered: "Shall the Hardware Business proceed with real cooperation between manufacturers, jobbers and retailers, or shall each branch of the industry continue to struggle for itself in a sea of suspicion, doubt and strife?"

Cooperation No Longer a Theory.

"We know—those of us who are awake—that cooperation is no theory. It won a war, it broke down

race and religious bigotries, it raised billions for Red Cross and other relief work, speeded up production and put over Liberty Loans. But why talk about cooperation to representatives of organizations which are founded on cooperation? It seems like exploiting Democracy at a Democratic Convention.

"We are all committed to cooperation within our own groups and agree that it is a good thing for our individual interest. Is there any question about its being a good thing for our business as a whole?

"Every manufacturer wants the closest cooperation between his sales force and his production department. Every jobber demands cooperation between his buyer and his salesmen, and every retailer aims at success through the cooperation of his buying and his selling force.

"Now if cooperation is insisted upon by the individual to this extent, why has it gone so long without cooperation between the manufacturer and jobber on one hand, and the retailer on the other, the retailer being nothing more or less than his real selling force?



Matthias Ludlow, President National Retail Hardware Association.

The manufacturer and jobber do not often come in direct contact with the ultimate consumer, but why should he hesitate to follow his product through to the store customer by cooperating in a general way with the retailer? The manufacturer should not be satisfied until his goods leave the retailers' shelves.

Solution of Many Problems Lies With Manufacturer or Jobber.

"Whenever any representative group of the 18,000 or over organized hardware retailers meet there comes up questions of business practice or ethics, the solution of which lies with the manufacturer or jobber and there is no means of getting together on such questions. With established cooperation, concerted action and the understanding that would result from close relationship among the three branches of the business, such questions would be readily settled to the general satisfaction of all and to the best interests of the hardware trade.

"Manufacturers have discussed establishing suggested resale prices on their products with such prices printed on the articles. How could they settle such a question without getting the best thought and judgment of the retailer? I mention this as one issue only upon which closer cooperation would make for business betterment and trade harmony.

"Then there is the question as to what treatment is justly due the retailer at the hands of the manufacturer. Catalogue houses are in some cases in a position to sell an article to the consumer at a lower price than the retailer can buy it. Is this a healthy condition for the hardware business generally, and does such a condition interest manufacturer, jobber and retailer alike, as a matter of business ethics?

"The curb trader has been eliminated from the lumber business, building material lines, and other trades on a question of fair dealing, but the hardware business has not considered him seriously. Yet men who carry no stock and have no overhead to meet, buy at the price established for reputable retail hardware dealers and can afford to undersell them.

Suggests a General Conference.

"Would it not be best to have a general conference of all branches of the business before any radical change is put into effect? If all branches of the business were consulted when changes of policy are contemplated there would be more harmony and better feeling generally, and policies would become uniform in our industry, and I believe there can be no question as to such a condition being beneficial.

"Manufacturers and jobbers in a good many instances are inclined to discontinue the 2 per cent discount for prompt payment. Associations or exchanges have been formed with this object in view, and the amounts made or saved by this policy have been reported. Has anybody reported how the retailer feels about such a policy, or has any report been made of sales lost by manufacturers or jobbers because of such a policy? Would it not be best to have such a policy passed upon by a conference of all before definite action is taken? Of course, we are all willing to listen to the man who has a scheme which will save us money, and if he saves us anything, we are willing to share it with him. But there have been cases where such schemes have appeared to save money, but the only one who has really made a dollar out of them was the man who started the scheme without any regard for what destruction it might cause in the business to which it was applied. It has also happened that it cost more to get rid of such a scheme than it ever could have saved for the man who paid for it.

Closer Union Necessary to Weather Re-Construction Period.

"The hardware manufacturers are the cream of American business men, and they live in harmony, with as fine a code of morals and ethics among them as exists in any other line of business. We recognize the same thing with regard to jobbers. I know the retailers are just the same kind of human beings, no more faults and failings and no greater virtues, and it would seem to me that the time has now come when the three groups should be more closely allied, and that the cooperation existing in each group should act in concert for the betterment of the hardware trade. This

acting in unison will make it easier for all of us to face a very trying period of reconstruction which is now under way.

"National affairs at one time belonged exclusively to platform-making conventions of political parties. We were so peaceful and prosperous that national policies were just a matter of preference or argument, like an inclination to play golf or billiards. No longer are national affairs a matter of temperament, when they begin to affect social structure and touch our pocketbooks. Just at present it is a heavy touch that makes us fairly wince.

"However, we may stand the touch with a feeling of patriotism, we feel that we must be careful, because too much of anything is injurious, and social conditions are in a fair way to affect our pocketbooks and the ideals we hold more precious than gold.

Situation Calls for Real Interest in Politics.

"It becomes natural and fitting that strong organizations like ours should interest themselves in national affairs, and they can do so without becoming political partisans. It is to my mind necessary under existing conditions. We can not blind ourselves to the advisability of a firm policy against Bolshevism or anarchy or anything that affects our safe and sane constitution; our interest is so closely tied up with the question of a League of Nations or a guarantee of permanent peace, a national budget system to safeguard expenditures and assure some measure of equitable and just distribution; our future prosperity is closely related to the establishment of an American Merchant Marine; development of waterways is imperative for commerce; and the luxury tax directly interferes with the relationship of buyer and seller.

"None of these questions affects only one group of businessmen. They all affect all business men and should be met with combined strength and in order.

Recommends Price Maintenance Law.

"Other national policies affect our business more directly than these. The National Retail Hardware Association has acted on two such issues. At the annual convention action was taken condemning the manufacture and sale of misbranded merchandise and misleading and harmful advertising and selling, and laws were urged against such practices. The Convention also endorsed the recommendation of the Federal Trade Commission for an early passage of an equitable Price Maintenance Law. Both of these questions are of interest to the hardware business as a whole, belonging particularly to no one group.

"Any business must stand as a unit. Moral standards are improving and betterment of any business belongs equally to all who are engaged in it or its allied lines. The evil that retailers do affects the manufacturer and the dishonesty of one businessman affects his honest neighbor.

"To illustrate: There has risen in this country an Anti-Saloon League which caused the Constitution to be changed. It did not exploit on evil of the manufacturer but made its whole case out of the evil of the place where liquor was sold at retail. It was not an anti-distillery league, nor an anti-brewery league. The distiller and the brewer were put out of business because of retailers' methods, and because the manufac-

turer was careless about who did the retailing and how he did it.

"I see no comparison between the hard drink line and the hardware line, excepting that the former gives us a rather exaggerated example of the close relationship of the interests of manufacturer and retailer.

More Sympathy of Understanding.

"Every line of business is making for close cooperation at this time. We have found that our national isolation is a thing of the past. Everything has a league of something now, and if we had a league of hardware dealers with an honest desire to stabilize conditions and protect our industry, we ought to have peace, harmony and future development. Such a league could watch legislation and meet on an emergency call with regular meetings every six months. I believe we should have closer harmony of thought and more sympathy of understanding. We want to build up our industry by constructive methods. We can achieve anything by this elbow touching, by an exchange of opinion, by being on the square with each other, and by having the courage of understanding.

"I believe that this is the only industry where the investment is so great and the three great angles of the business have no intimate knowledge, no co-ordinate understanding of what each group is doing.

"Policies started by one group should be fully understood and concurred in by the others. We should have cooperation in the distribution of our product.

Radical Forces Work in Unison.

"The National Retail Hardware Association has suggested topics of great moment for us to consider, such as production, distribution, profiteering and other issues upon which we may well get together, not only for the salvation of our business but for the glory of the flag and those things that we hold dear as defenders of our basic law. The radical forces of the nation are welded together compactly, and there is only one force that will have the day, and that is a clean, wholesome understanding among men who will cooperate intelligently, put forth every effort to take the public into their confidence through a thorough understanding, one with the other in each line of established business.

"We are living in a great hour, a turning point in history, and more depends on the conservative, plain, common thought of our people than ever before.

"Our Associations have done a great deal in the past. We have abandoned misunderstanding and old Mr. Ruthless Competition has been converted into cooperation. Our retail association methods have made us better business men, and therefore, better customers for jobbers and manufacturers. We sell more goods.

An Illustration of Modern Cooperation.

"I remember when smart practice was the rule. Retailers were like wolves, if one went down, the pack turned him on to devour him in a business way. Not long ago we had a fire. The first calls we had, even before the insurance appraisers were on the ground, were from other retailers who expressed sympathy and offered their stocks to help us preserve our trade. This illustration of modern cooperation came to us hard, and even in the excitement and confusion of the moment, we exclaimed, 'What a change.'

"Previous to association days other men in the business would have hurried out to see what they could

do to get the business we had taken years to obtain and hold.

"We can and must, as the foundations of our Government are being rocked, stand shoulder to shoulder as a unit to preserve our institutions and enter the new era with dignity and strength. This can be done only by team work on the part of the three groups of our single industry.

Price-Cutting is Harmful.

In the last analysis it is the consumer's interest that must be considered in arriving at an answer to the question: Is the principle of price maintenance—the right of the manufacturer to fix and enforce the re-sale price of his goods—good for the consumer, and desired by the consumer?

Some contend that price maintenance raises the cost of living; that it is an effort to obtain higher than fair or reasonable prices from the consumer; that it is an expedient to enrich the manufacturer. But those who argue thus have not, as a rule, given the whole broad matter any serious, deep, wide and prolonged consideration. Their judgments and conclusions, as a rule, are of the "snap" variety, superficial and feathery. These good people, who may be very honest, see in price maintenance a foe to open competition, and a studied, calculated effort to enhance the final price—the price to be paid by the consumer.

It is to be admitted, frankly, that in regard to certain specific articles of products of the identified, standardized kind, the consumer price is excessively high—altogether out of relation to the cost of production. But the articles of this nature are, as a general thing, patented, and so are monopolies.

If consumers elect of their own free-will to buy the high-priced trade-marked and advertised article, when they are free and able to buy a cheaper, even if less satisfactory and acceptable, substitute article, is the blame for the seeming extravagance to be charged up to the manufacturer, or to the retailer? The higher cost of living is not to be charged to the makers of advertised, standardized, identified articles of food, dress, convenience, indulgence or luxury; but to the freely-exercised will of the people who choose to buy the highest-priced goods, and to the inexorable laws of supply and demand. Yet there are those who argue that if the right to fix and enforce re-sale prices be taken away from manufacturers, be refused them, or taken from them, the cost of living will fall. It is rather muddy argument and not at all convincing. Probably what the foes of the price-maintenance principle have in mind is combines of makers or producers to corner and control the price of commodities, and they confuse this with the admitted freedom of a maker of an article of which he has no monopoly to sell to the dealer at any price he likes.

Please note this carefully: it is granted by the foes of price maintenance that the manufacturer may fix the price to the dealer at what he wills, but they deny him the equal privilege or right to take a further step and fix the re-sale price—the price the consumer must pay; they leave this re-sale price to the dealer to fix, knowing full well that if the dealer has liberty to fix the price to consumers, he will exact more from them.

Good Ideas for Window Display

*Practical Lessons from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.
How to Get More Passers-By to Come into Your Store.*

WINDOW DISPLAY IS A FINE EXAMPLE OF ARTISTRY.

Notable in the literature and craftsmanship of the middle ages was Benvenuto Cellini.

His artistry was supreme as silversmith and goldsmith.

He was great enough to consider no utensil of daily use in a kitchen or dining room too insignificant for the adornment of his talent.

With the coming of the modern factory system, there began and lasted for a while a period of Puritan simplicity verging on ugliness.

Use was the first consideration. Adornment was looked upon as waste of effort.

by the pictures which apparently have no connection with the goods on exhibit.

But the imagination passes easily from the scenes in the upper panels of the background to the pleasing contour of the various electric, aluminum, and silverware articles.

The backgrounds of this window as described by Mr. Arcularius were made of beaver board.

The scenes are in water colors.

The two winter scenes and the two scenes on the right were taken from pictures of local places.

The first picture on the right is one of the Ozark playgrounds.

The second and fourth pictures on the right are of foreign scenes. The coloring in these pictures was



Window Display of Electric, Aluminum, and Silverware Goods, Designed and Arranged by C. H. Arcularius, Secretary, Joplin Hardware Company, 622-624 Main Street, Joplin, Missouri. Awarded Honorable Mention in the AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

With the revival of the spirit of the arts and crafts, however, there has been a gratifying development of artistry in the common things of life.

Beauty and utility are again brought into union. The appeal of art is strong in the merchandizing of today.

It is shown to good effect in the window display of electric, aluminum, and silverware goods, depicted in the accompanying illustration, which was designed and arranged by C. H. Arcularius, Secretary Joplin Hardware Company, Joplin, Missouri.

This display was awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

Unmistakably it is artistic, yet its selling appeal is forceful and direct.

The background intensifies the effect of its artistry

very delicate and the tints so softly blended that it was difficult to get a good photograph of them.

The trimmings are of black and purple velvet.

Proof positive of the practical benefit of artistic window arrangement is furnished by the records of the Joplin Hardware Company showing a considerable increase in the volume of sales of electric, aluminum, and silverware goods during the time that this display was in the window.

Window Display Competition Teaches Need of Study.

No man living knows all there is to know about window displays.

The most learned men in the world are the ones who have to study the hardest.

If they didn't put in long hours every day at their books or in their laboratories, they would soon fall behind in the march of knowledge and be numbered among the comparatively ignorant.

In the matter of window advertising, success is the reward of constant effort.

No retailer or salesman or clerk or mechanic is so far advanced in his business or occupation or craft that he can not learn more.

The purpose of AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, now under way, is to collect and make profitable the experiences and examples of others in gainful window advertising.

It has been proved that the most effective way to train people in resultful window display is through the instruction and emulation of a contest of this kind.

You never know how good your stuff is until you compare it with some standard or set of standards.

By taking part in this window display competition, you have the incentive of friendly rivalry.

More or less consciously, you will try to outdo everyone else—not only that you may win the prize but that you may develop your talent.

There is much to learn for every one of us, yet there is nothing difficult in the learning. Study and practice render the most perplexing crafts and arts easy of accomplishment.

You do not need to be a sculptor or a landscape painter to make effective backgrounds and arrangements of commodities in a profitable window display.

Use common sense. Put yourself in the other fellow's place.

Think of the things which interest you the most in a presentation of goods to the passer-by.

Examine carefully every window display in your town.

Watch how they affect the people who stop to look at them.

Then get busy.

Arrange a seasonable window display.

Take plenty of time to design and plan it.

Look carefully after contrast, color harmonies, lighting, and other details.

When your work is completed, have a good photograph made of the display, write the best description of it that you can and send the description and photograph to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

The conditions governing the competition are easy of fulfillment. They are as follows:

Award of Prizes.

The prizes will be awarded as follows:

First prize, \$50.00 in cash, for the best photograph and description received of window display of hardware or kindred lines;

Second prize, \$25.00 in cash, for the photograph and description second in merit;

Third prize, \$15.00 in cash, for the photograph and description third in order of excellence;

Fourth prize, \$10.00 in cash, for the photograph and description fourth in degree of worthiness.

Conditions of Competition.

The conditions of the competition are as follows:

The photograph must be accompanied by descriptions of how the window displays were arranged and the materials used. The description is important and hence should be adequate. These photographs and descriptions may be sent by mail or express, charges prepaid, and must reach this office not later than February 15, 1921. Address all photographs and descriptions to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, 620 South Michigan Avenue, Chicago, Illinois.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be put in a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants are permitted to enter as many photographs of displays as they please.

A Competition Committee of three will be appointed. One of them will be an expert window dresser and one an experienced hardware man. This Committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the Competition.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted.

Saw Manufacturers Help Dealers Develop New Business.

A very intensive and well prepared advertising campaign is being conducted by the manufacturers of Disston's saws and other tools, for the purpose of helping retail hardware dealers develop more business with the householder and his sons, in addition to their regular business in regular carpenters' outfits, and some very interesting copy is being published in twenty-nine farm papers with a combined circulation of nearly five million people.

The copy to the farmers talks good, hard "horse sense" like this:

"The farmers of this country own a \$200,000,000 woodlot. How much money will you make on your woodlot? Coal will be mighty scarce next winter. Many a factory, many a family, will have to use wood. Sell all the wood you can cut. Use a Disston Cross-Cut Saw for felling and cutting cordwood lengths."

"Cut Your Firewood With a Disston Bucksaw" is another caption, while Disston corn-knives, hand-saws, mitre-box saws, try-squares, bevels, etc., are also featured.

The advertising to boys is aimed at the boy, his father and his manual training shop at school. Here is a fairly representative piece of copy:

"There are two good reasons why Disston saws and tools should be shop equipment in your school: (1) The student will be started with standard tools that help shape his ability correctly from the start. (2) Disston is the standard he will select, use and depend upon later, at his trade, when he comes to know what's what in tools."

He who aims below the stars aims low.

Points Out Details Which Are Important to Creditors.

There are certain simple details in safeguarding the rights of creditors which every hardware dealer and sheet metal contractor should know for their own protection. As explained by Chesla C. Sherlock, formerly secretary of the Iowa Industrial Commission, writing in the *Iron Trade Review*, the payment of debts, whether by money, check, note, draft, or order, presents many rules of liability thrown out by the law to safeguard the debtor as well as the creditor that seldom enter the mind of either party, until trouble arises.

Suppose that you sell an order of machinery to a firm which has had ample credit in the past. You sell it on open account, to be paid in 90 days. The time rolls around and the purchaser of the machinery finds himself unable to pay. He comes to you and wishes to give his note for 90 days, since he can not make settlement in cash. You agree to this offer and accept his note.

These questions instantly arise: Does the acceptance of the note operate as payment or satisfaction of the original obligation? Should the purchaser rapidly come to the point of insolvency, can you disregard the note and bring suit to force collection on the original debt? Could you recover the machinery?

The courts hold that the acceptance of a negotiable note or commercial paper by the creditor does not operate as payment of the debt or satisfaction thereof, unless there has been a specific agreement to that effect at the time.

"If I give you my note in payment of my debt, will it be satisfactory to you?" asks the debtor. If you reply in the affirmative, then you accept the note as payment, and you lose all rights that you had under the original obligation.

But in the absence of this specific agreement no such rights are lost, for the note can not be considered as payment of the original obligation. It is merely in the form of a collateral agreement or security as to the ultimate payment of the debt. A promise to pay can not be deemed payment, and if the courts gave this effect to the mere acceptance of a promissory note in lieu of payment one can readily see the grotesque position in which business men would soon find themselves.

Courts do hold, however, that the acceptance of the note in lieu of payment suspends the right of action on the original debt until the note becomes due, and any advantage which the free and unrestricted right of action would give the creditor is cut off by the acceptance of the note.

If the note remains unpaid on the date it falls due then the creditor is not bound to sue on the note alone, but he may bring an action either under the note or upon the original obligation, just as he chooses. It is well settled, even where the note is given as collateral or under a conditional agreement to pay, that the creditor must produce the note before he can collect on the original obligation. And this is an instance where the protection afforded by the law looks to the security of the defendant almost entirely.

Checks are very commonly used in the transaction of business, especially in the payment of debts. Yet business men may be surprised to learn that with the exception of a very few jurisdictions, the general rule of law is that the giving of a bank check by a debtor for the amount of his indebtedness is not a payment or discharge of the debt, in the absence of a specific agreement to the contrary.

It is generally held that the presumption is that the check is accepted on condition that it be paid, and further that the debt is not discharged until the check is in fact paid, or accepted at the identical bank where it is made payable.

The creditor, then, can lose no rights that he had prior to the payment by check or draft, even by the surrender of the note or by the giving of a receipt for the same, unless he has entered into a specific agreement to accept the check as payment of the original indebtedness. But the creditor can lose some very substantial rights according to the diligence and the manner in which he handles the check or bank draft, as the case may be. The law holds him to the exercise of reasonable care and diligence in presenting the check or draft for payment, and unless he exercises such care he must suffer all of the loss himself.

The law has no patience with the man who is guilty of carelessness, or *laches*, as it is called at law, and where such is evident it will take no pains to protect him or his property. The rule seems to be well settled that the check or draft should be presented during banking hours the day following its receipt by the creditor in order to evidence an exercise of "reasonable diligence" in the presentment of it by the creditor, especially where both the creditor and the debtor live in the same town and the bank upon which the check or draft is drawn is also located.

A fine question is often raised as to whether the creditor, in the exercise of due diligence, is bound to present the check at the bank upon which it is drawn, or if he may trust it to go through his own bank and the regular banking channels to the proper bank. Payment is not made until it has been accepted by the bank upon which it is drawn. Your own bank merely acts as your agent in collecting the amount of the check or draft, and not as the agent of the bank upon which the check or draft is drawn. And presentment to your bank, in a finely drawn case, probably would not be considered as presentment to the bank upon which the order is drawn, where the bank is located in your own vicinity.

Instances of loss in such cases are infrequent, but the principles which govern are important to the average business man. It is not the knowledge of the usual and the ordinary that always means the most to the business man, especially where the finger of law is interwoven in his business transactions.

If the debtor is in a bad position, and you fail to exercise the diligence the law expects of you, such as reasonably prudent men would exercise in the conduct of their business, and the bank fails, or the debtor becomes insolvent, or his funds are attached in the interval by some other creditor, you will find yourself out of court and without a penny to show for your pains.

Hardware Club of Chicago Elects Officers.

The officers chosen to administer the affairs of the Hardware Club of Chicago for the ensuing term are as follows:

President: A. VERE MARTIN;
Vice-President: HENRY A. SQUIBBS;
Secretary: W. S. KENNEDY;
Treasurer: JOHN D. PATTEN.

The newly elected president, A Vere Martin, served in the same capacity for many terms during the formative period of the Club, and was largely instrumental in winning for the organization the success and prestige which it now enjoys.

The retiring president, Allan J. Coleman, takes with him the good-will and keen appreciation of every member of the Club. During his term of office, he accomplished a great deal in developing a spirit of neighborly friendliness throughout the membership. By putting special emphasis upon the idea that we are all just folks, he contrived to intensify the idea and practice of fellowship.

Henry A. Squibbs, vice-president, is not only the cheer master of the Club, and official conveyor of sunshine and laughter, but he is also a shrewd and efficient executive.

The secretary, William S. Kennedy, served in the same office during the preceding term. His pleasant manners, sound judgment, and even temperament are valuable assets to the Club.

John D. Patten was reelected to the office of treasurer. He can make every dollar yield one hundred cents. Also, he is genial, obliging, and a friend of every man in the organization.

Gets Trade-Mark Registered In Patent Office.

Under number 134,120, United States Patent Office registration has been granted to French Battery and



Carbon Company, Madison, Wisconsin, for the trade-mark shown herewith. The particular description of goods to which it is applied is dry cell batteries, flash light batteries, portable electric hand lamps, and flash light cases or torches. The company claims use of this trade-mark since February

15, 1917. Application for registration was filed June 24, 1920.

Simonds Establishes British Saw Company.

Another triumph for American manufacturing skill and progressiveness is registered in the news that the Simonds Manufacturing Company, the saw makers of Fitchburg, Massachusetts, and Chicago, Illinois, have just secured a charter and established a new company in Great Britain, Connecticut, to be known as Simonds Saws, Limited.

An office and shop has been opened at 53 Bayham,

Camdentown, London, N. W., where a full line of Simonds Saw Steel Products as demanded in Great Britain will be carried.

The shop will provide for maintenance and repairs of saws, machine knives, and other edge tools produced by the Simonds Company.

Guy A. Eaves, formerly connected with the Fitchburg plant of the company, has assumed the duties as office manager, and Leon E. Wilbur, a Simonds man, who has covered the Great Britain territory since his discharge from the army in France, will be associated with him.

The Simonds Manufacturing Company now maintains plants in Fitchburg, Massachusetts, Chicago, Illinois, Montreal, Canada, and a steel mill at Lockport, New York, where the steel used in the manufacture of Simonds Saw Steel Products is made. In addition to the new British branch the company maintains twelve branch houses, located throughout the United States and Canada.

Trade Opportunities in Foreign Lands.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

33877.—A commercial agent in Brazil is in the market for hardware and arms. Quotations should be given c. i. f., Brazilian port or f. o. b. American port. Terms: 60 and 90 days drafts. Correspondence may be in English. References.

33888.—A commercial agent in Brazil desires to represent American exporters of hardware. Correspondence should be in Portuguese. No references offered.

33890.—Manufacturers and exporters of Maraschino cherries who are not represented in Canada are invited to communicate with a commission house in that country. No reference offered.

33905.—The South African agency for fans operated by kerosene or spirit lamps is desired by a firm in that country. Reference.

33906.—A merchant, trading in agricultural implements, in Wales, desires to purchase binder twine such as used for binding grain by reaping machinery in 10 and 20 ton lots. Quotations to be given c. i. f. Welsh port. Terms: Cash against documents. References.

33907.—A firm in Canada desires to purchase cooper's tools. Quotations to be given f. o. b. shipping point. Terms: Cash. Reference.

33915.—A commercial agent in France desires to represent firms trading in automobiles and automobile equipment and accessories.

33919.—A merchant in France desires to purchase from American manufacturers and exporters such articles as asbestos in all its forms. References.

Coming Conventions.

American Washing Machine Manufacturers' Association, Hotel Sherman, Chicago, Illinois, November 10 and 11, 1920. E. B. Seitz, Secretary, 10 South LaSalle Street, Chicago, Illinois.

Automotive Equipment Association, Coliseum, Chicago, Illinois, November 15, 16, 17, 18 and 19, 1920. William M. Webster, Commissioner, 1813-1818 City Hall Square Building, Chicago, Illinois.

Automobile Accessories Branch of the National Hardware Association, Coliseum, St. Louis, Missouri, November 30, December 1, 2, and 3, 1920, headquarters, Hotel Statler. T. James Fernley, Secretary-Treasurer, 505 Arch Street, Philadelphia, Pennsylvania.

Southern Association of Stove Manufacturers, Evansville, Indiana, December 6 and 7, 1920. W. H. Cloud, Secretary, 216 Glendora Avenue, Louisville, Kentucky.

Texas Hardware and Implement Association, Adolphus Hotel, Dallas, Texas, January 18, 19, and 20, 1921. A. M. Cox, Secretary, 1808 Main street, Dallas, Texas.

Western Retail Implement, Vehicle and Hardware Association, Kansas City, January 18, 19 and 20, 1921. H. J. Hodge, Secretary, Abilene, Kansas.

Pacific Northwest Hardware and Implement Association, Seattle, Washington, January 18, 19, 20, and 21, 1921. E. E. Lucas, secretary, Hutton Building, Spokane, Washington.

Missouri Retail Hardware Association, Planters Hotel, St. Louis, Missouri, January 25, 26, and 27, 1921. F. X. Becherer, secretary, 5106 North Broadway, St. Louis, Missouri.

Mountain States Hardware and Implement Association, Brown Palace Hotel, Denver, Colorado, January 25, 26, 27, 1921. W. W. McAllister, Secretary-Treasurer, Boulder, Colorado.

Indiana Retail Hardware Association, January 25, 26, 27 and 28, 1921. (Place to be announced later.) G. F. Sheely, Secretary, Argos, Indiana.

Oregon Retail Hardware and Implement Dealers' Association, Portland, Oregon, January 25, 26, 27, and 28, 1921. E. E. Lucas, secretary, Hutton Building, Spokane, Washington.

Kentucky Hardware and Implement Dealers' Association, Louisville, Kentucky, January 25, 26, 27 and 28, 1921. J. M. Stone, Secretary, Sturgis, Kentucky.

West Virginia Retail Hardware Dealers' Association, Huntington, West Virginia, February 1, 2, 3, 1921. James B. Carson, Secretary-Treasurer, Dayton, Ohio.

Nebraska Retail Hardware Association, Hotel Rome, Omaha, Nebraska, February 1, 2, 3 and 4, 1921. George H. Dietz, Secretary, Lincoln, Nebraska.

Wisconsin Retail Hardware Association, Milwaukee, Wisconsin, February 2, 3 and 4, 1921. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Oklahoma Hardware and Implement Association, Oklahoma City, February 8, 9, and 10, 1921. W. B. Porch, secretary-treasurer, Oklahoma City, Oklahoma.

Michigan Retail Hardware Association, Grand Rapids, Michigan, February 8, 9, 10, 11, 1921. Arthur J. Scott, Secretary, Marine City, Michigan.

The Michigan Retail Hardware Association, Grand Rapids, Michigan, February 8, 9, 10, and 11, 1921. Arthur J. Scott, Secretary, Marine City, Michigan.

Iowa Retail Hardware Association, Des Moines, Iowa, February 8, 9, 10, and 11, 1921. A. R. Sale, secretary-treasurer, Mason City, Iowa.

North Dakota Retail Hardware Association, Fargo, North Dakota, February 8, 9, 10, and 11, 1921. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition, Philadelphia Commercial Museum, Philadelphia, February 8, 9, 10, 11, 1921. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 15, 16 and 17, 1921. Leon D. Nish, Secretary, Elgin, Illinois.

California Retail Hardware and Implement Association, San Francisco, California, February 15, 16, and 17, 1921. LeRoy Smith, secretary, 112 Market street, San Francisco, California.

Minnesota Retail Hardware Association, St. Paul Auditorium, St. Paul, Minnesota, February 15, 16, 17, 18, 1921. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Ohio Hardware Association, Columbus, Ohio, February 15, 16, 17 and 18, 1921. Hotel Headquarters, Deshler Hotel, Exhibition in Memorial Hall. James B. Carson, Secretary, Dayton, Ohio.

New England Hardware Dealers' Association, Mechanics' Building, Boston, Massachusetts, February 21, 22, and 23, 1921. George A. Fiel, secretary, 10 High street, Boston, Massachusetts.

Michigan Sheet Metal Contractors' Association, Hotel Durant, Flint, Michigan, February 22, 23, and 24, 1921. F. E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

New York State Retail Hardware Association, Rochester, New York, February 22, 23, 24, and 25, 1921. John B. Foley, Secretary, 607 City Bank Building, Syracuse, New York.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, February 22, 23, 24, 25, 1921. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 8, 9, and 10, 1921. Troy Thompson, Secretary, Treasurer, Dalhart, Texas.

Hardware Association of the Carolinas, Charlotte, North Carolina, May 10, 11, 12, and 13, 1921. T. W. Dixon, secretary-treasurer, Charlotte, North Carolina.

Southeastern Retail Hardware and Implement Association (composed of Alabama, Florida, Georgia and Tennessee), Atlanta, Georgia, May 17, 18, 19 and 20, 1921. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta, Georgia.

Retail Hardware Doings.

Illinois.

E. E. Jewell has sold his interest in the hardware store at Bryon to Harry Embick. The business will be continued under the new name of Emery and Embick.

Kansas.

L. M. Stevens has sold his hardware and implement business to C. E. Gants at Melvern.

M. L. Strand has purchased the L. D. Hanson implement stock at Clifton.

A. F. Starser has moved his hardware store to 1313 Southwest Boulevard at Rosedale.

Fred Zutavern will retire from the implement business at Great Bend, having sold his stock to his sons Kurt and Hubert L. Zutavern of Topeka.

L. M. Moline Implement Company, Rice County, Lyons, has been chartered with a capital stock of \$25,000 by E. D. Isern, August Lautermann, W. J. Myers, all of Ellinwood.

Shockey and Landes have purchased the Sterl lots on Cedar Street at Abilene adjoining their implement warehouse and will erect a two story brick 100x75 feet building with plate glass modern front facing Cedar Street, to accommodate their International Harvester business.

Michigan.

The Travis Hardware and Garage Company operating stores at Allegan, Wayland, and Plainville, have opened a garage and hardware store at Hamilton.

R. S. Jennings, hardware dealer at Harvard City, has bought the Charles Will hardware store at Coral which will be operating as a branch.

The Munising Hardware Company has been incorporated with a capital stock of \$25,000 at Munising.

Minnesota.

Judson Shaw will turn his hardware business at Clearwater over to his sons and will retire from business.

Harmony Hardware Company has been purchased by C. Barlow at Harmony.

Missouri.

Farmers Lumber and Hardware Company has been incorporated with a capital stock of \$15,000 at Clarksburg by J. H. Ruppert.

H. D. Skinner has purchased the A. M. Delaney hardware and implement business at Cowgill.

Charley Worley has purchased the interest of his partner, Fred Sheley, in the hardware firm of Sheley-Worley Company at Hopkins and the new firm name will be the Charles Worley Hardware Company.

Nebraska.

T. H. Whilick has sold his hardware store at Ericson to Martz Brothers.

D. J. Yost has sold his hardware business to his sons M. J. and J. H. Yost at Summer.

Ohio.

The Krampe Implement Company has been incorporated with a capital stock of \$50,000 by B. R. Westfall, E. Krampe, R. A. Stock, at Port Loramie.

Oklahoma.

C. M. and C. W. Robertson have purchased the hardware store of E. E. Vice and Sons at Laverne.

Preparations are being made to add a line of hardware to the Grady County Exchange at Chickasha.

South Dakota.

Opocensky and Jones have purchased the Jordan Hardware Company at Burke.

Texas.

The new hardware store is now open for business at Honey Grove under the management of Smith and Johnstone, West Side Square.

The Thompson Hardware Company purchased the Gouddy Furniture and Undertaking Company at Canyon.

The Childress Hardware and Implement Company has been purchased from S. P. Buster and will now be known as the T. L. Welch Hardware and Implement Company at Childress.

After November first, the Maroney Hardware Company will conduct a jobbing business at Dallas, discontinuing their retail store.

Brady and Black, well known hardware dealers of Temple, have closed a deal for the Rudd Building, and another building facing east on Second Street. Owing to increasing business the firm was forced to expand.

Wisconsin.

Leo F. Harter, Jr., has opened a hardware store at 1021 Sixteenth Street at Racine.

Fay Eddington bought a half interest in the Wodd Hardware Company at Janesville.

C. G. Knospe has sold his hardware business to G. L. Smith and Ray Fetting at Alma.

Selling Automotive Accessories

How Hardware Dealers Can Increase Their Profits by Handling Standardized Automotive Accessories. Facts and Suggestions to Aid Them in Giving Better Service.

BATTERY NEEDS CONSTANT CARE TO GIVE SERVICE.

Many millions of times it has been said that knowledge is power. Yet, there are dealers in automotive accessories who fail to realize the full significance of the saying.

The power to draw customers to your store comes first and foremost from knowledge of their needs and knowledge of the goods which you are prepared to sell them.

Service without knowledge is weak and defective.

The more you know about the various parts of the motor car the more intelligently you can serve your trade.

Often, a bit of advice given in a friendly fashion may save your customer vexation of spirit, loss of temper, and waste of money.

Particularly is this true in regard to the lighting, starting, and ignition devices of the automobile.

You should make it your business in spare moments to become thoroughly acquainted with the principles of the electric battery and their application in use on a motor car.

Thus, for example, when a battery has been run down to such an extent that it must be rebuilt, the owner is frequently told that only the positive plates need replacement and that the negatives can be pressed and made good as new.

The correctly informed dealer in automotive accessories knows that this is not good or helpful device.

The pressing of the negative plates causes the rebuilt battery to be inefficient and hardly able to take a charge.

This is because chemical action is slow and is, in fact, merely surface action instead of going right through the material.

The dealer should advise his customer to watch the meter on the dash. This meter tells if the battery is being charged and it also notifies him if the battery discharges when the starter is used or when lights are used when the car is running slowly.

Patents Tire Chain Connection.

Stewart Goddard, Toronto, Canada, has secured United States patent rights, under number 1,353,828, for a tire chain connection described as follows:



A hook for tire chains provided with two ears one adapted to fit against the side of a wheel rim and the other against the inner surface of the rim, the first ear having a hole for a screw formed therein and the other being provided with a cone-pointed

spike threaded through the lug adapted to be driven into the rim, a head being formed on the screw adapted when turned to a suitable position to close the opening of the hook.

Suggests That Jobbers Help Retailer to Build Trade.

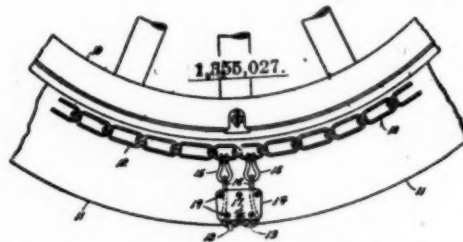
At the meeting of the National Hardware Association of the United States this week in Atlantic City, New Jersey, A. H. Nichols, chairman Automobile Accessory Branch of that organization, said:

"Should we not assist the retailer of hardware and endeavor to show him that the goods that have formerly been kept in the background should today occupy a more prominent place in his store? That wrenches, pliers, cold chisels, machinists' hammers, and all such goods should be displayed as conspicuously as cutlery and other goods have been in the past?"

Is Granted Patent Rights for Antiskidding Device.

Under number 1,355,027, William P. Bell, State College, Pennsylvania, has been granted United States patent rights for an antiskidding device described in the following:

In anti-skidding device the combination with spaced pairs of cross chains and circular supporting chains, of



links connecting the ends of the cross chains with the supporting chains and studded blocks having said links passing therethrough and secured to the blocks to dispose the blocks adjacent the ends of the cross chains and between the cross chains and the supporting chains.

Two Uses for Soap Boxes.

Neglected opportunities are responsible for more of the discontent that exists among the working people than anything else. Whereas the young man of the present day who thinks he is bright spends his evenings standing on a soap-box disseminating misinformation, Lincoln spent his evenings sitting on a soap-box filling his own mind with reliable and useful information.

Give to the world the best you have and the best will come back to you.

Advertising Help and Comment

Send Us Copies of Your Advertisements. Let Us Help You Get Bigger Results by Advice and Suggestions. The Service Is Free. Don't Hesitate to Take Advantage of It.

It is good psychology to get people thinking about your commodity.

If you can do it in a natural way by stirring up suggestions of personal needs your advertisement is all the more effective.

This is well done by the Rice Hardware Company in the copy

Cold Wave Coming

There will be many of them in the months just ahead. Are you prepared in the way of heat? If not, we want to call your special attention to our

FURNACE STOVE

This is not just an ordinary heater, but one that embodies all the good features of the pipeless furnace, with those of the common heating stove, at a cost less than most ordinary hot blast stoves, making it the

BEST HEATING STOVE BUILT

It generates a clean dustless heat; it purifies the air of the home, and it heats every nook and corner with absolute uniformity. This was the only stove used by the federal authorities at the University of Minnesota in their demonstrations and lectures to the public in the interest of fuel conservation.

Successfully Built for Ten Years

And never a dissatisfied user. Burns wood, coal or slack. Let us demonstrate at our store.

RICE HARDWARE CO.

115 Market Street.

Phone 31.

reproduced herewith from the *Logansport Pharos Tribune*, Logansport, Indiana.

The warning, "Cold Wave Coming," makes us think of stoves and furnaces at this time of the year.

With few exceptions, everyone wants to have some degree of certainty about dependable heat during inclement weather.

It is not enough to have warmth. Most of us want mechanical comfort in connection with it.

That is to say, we don't want heat with dust and smoke and needless labor to keep it uniform.

These points are convincingly emphasized by the Rice Hardware Company in the advertisement under consideration.

An exceptionally good feature of this advertisement is the statement that the stove was used by the federal authorities at the University of Minnesota in their demonstra-

tions and lectures in the interest of fuel conservation.

Some advertising counsellors would urge that this statement be made more conspicuous in the copy.

But that is a matter of individual judgment.

The general run of people may be relied upon to get the full value of the statement as it is set forth in the regular type of the text.

Indeed, over-emphasis often defeats its purpose.

Usually there is too much shrieking in advertisements.

Typographical stressing is only for the purpose of attracting attention. Once that purpose is accomplished, the text should proceed quietly and convincingly without further accentuation.

* * *

An example of strong simplicity is furnished by the advertisement of Bell-Hubbard Hardware Company, which appeared in the *Anniston Star*, Anniston, Alabama.

The copy in the original occupied four inches by two columns wide.

This advertisement appeared toward the end of July, at which

Turnipseed

We have all kinds of Turnipseed. Now is the time to buy them.

Bell-Hubbard Hdw. Co.

1012 Noble St.

Phone 171

time turnip seed was being planted for late crops in Alabama.

Manifestly, there was no need to quote prices in copy of this general character.

A commendable feature of the advertisement is the generous em-

ployment of white space for emphasis.

* * *

The one column advertisement of E. Morgan's Sons in the *Times-Leader*, Wilkes-Barre, Pennsylvania, which is shown herewith calls attention to an article of necessity in every home, but why not tell the prospective customer something



A Good
Step Ladder
Is a
Necessity

In Every Home

Our ladders are made of spruce, strong but light and easy to handle.

E. Morgan's Sons
11-13 W. MARKET ST.
HARDWARE

about what he will have to pay for one of these step ladders?

It isn't necessary to quote a cut price. In fact, there is no particular reason why some retailers seem to feel that an advertisement always implies the necessity for quoting "reduced" prices. The average customer wants to know four things about an article:

- (1) Where can I buy it?
- (2) What purpose does it serve?
- (3) Is it well made and of what material?
- (4) What will it cost me?

The first is answered by the name plate. The second and third are found in the description. The fourth is given in the quoted price—and unless all four points are covered in the advertisement, it is lacking in efficiency, and because of this lack the advertising medium often gets the blame although it really belongs to the man who prepared the copy.

Warm Air Heating and Ventilating

*Better Installations. How to Sell More Warm Air Heaters.
Reports of Progress in Warm Air Heater Research Work.
Ventilating Factories, Garages, Theaters, and Houses.*

DESCRIBES VENTILATION SYSTEM FOR DYE HOUSE.

The problem of mechanical ventilation is intensified nowadays through the increase in the number of workers, with a view to greater production, says J. E. Brierley in a paper read before the West Riding Section of the Society of Dyers and Colorists, at Bradford, England.

A matter of the first importance is the removal of steam. In bleaching, dyeworks, chemical and other works, the amount of steam is frequently a serious menace to the health, and as vision is affected it increases the risk of accidents.

Most manufacturers only find difficulty in the winter, and therefore the condition to be obtained is a summer atmosphere all the year round.

This is achieved by blowing in warm air and thus creating practically summer conditions.

The usual method is to employ a propeller fan discharging over a cast iron sectional radiator heated by low pressure steam, the distributing ducts being carried down the center of the room.

Condensation, which is a source of annoyance to workers, is overcome by this method.

Wherever there is likelihood of condensation, roofs should be entirely of woodwork and no cold iron should be exposed.

It will also help if cold water pipes are carried under the floor.

Where a large volume of steam is given off in a limited area, it is better to localise it with hoods fitted with extracting fans, and if the hoods are formed of waterproof cloth fastened to light timber frames, they do not obstruct the light to the same extent as wooden hoods.

Where there is possibility of corrosion being present, the fan blades have been specially constructed of teak.

The efficient removal of dust is becoming of greater importance year by year, and it means greater efficiency both of men and machines.

The output of the men has improved by better atmospheric conditions, while there is less wear and friction in machinery.

The system of removal may be local, general, or a combination of both.

Probably in no direction has greater progress been made than localised ventilation of this kind.

Special attention has been directed to removing the dust from the point of origin in all dust-producing processes.

Generally a keen draught and pressure fan are required.

A more difficult matter than the removal of the dust is the collection and settling after its removal by the fans.

Where dust is not abrasive, the best method is to use a cyclone separator, the discharge being fitted with a two-way valve and the dust deposited in bags.

Several forms of automatic dust collecting machines are used. In most of these the air escapes through canvas and good results are obtained by using cyclones for the bulk and the special collecting machines afterwards.

Regarding combined warming and ventilation; during cold weather the artificial heating of many factories is essential to prevent the freezing of the liquid in vats, tanks, and pipes, besides providing comfort.

Many difficulties are solved by employing warm air supplied by fans.

A temperature of 52 degrees is found to be sufficient for manual labor when the outside air is 32 degrees.

Where there is no manual exercise, however, the temperature should be 60 degrees.

Warming and ventilation can be arranged in several different ways.

Merely exhaust ventilation is not successful.

The simplest form of extraction combined with heating, is to place the extracting fan well up in the roof and place the heating radiators round the walls of the room and admit fresh air where possible behind the radiators.

Modern factories are usually on one floor and cover a large area, rendering this course difficult with the center of the area.

With mechanical warming and ventilating appliances the fresh air can be delivered by ducts right into the center of the building and the distribution of air and heat made uniform throughout the works.

Another system of warming is the unit system, in which a number of independent unit heaters are employed, each being capable of heating a certain space.

No structural disturbance is necessary, nor provision of air shafts overhead.

The essential things are to get correct volume of air, correct temperature and proper distribution of the air.

The air must be distributed in properly placed ducts.

Very often the heater reduces the capacity of the fan, so that temperature is obtained instead of volume of air.

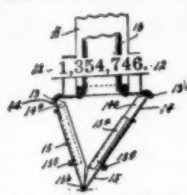
The temperature on leaving the duct should be 85 degrees.

Providing the amount of steam in the atmosphere is not physically too great for the cubic contents of the dye house, there is no reason why the place should not be made perfectly comfortable for work.

Patents Adjustable Deflector for Warm Air Furnaces.

Arnt Hendrickson, Minneapolis, Minnesota, has procured United States patent rights, under number

1,354,746, for an adjustable deflector for warm air furnaces described as follows:



The combination with a warm air floor register and a partition wall having an opening overlying said register, of a deflector made up of two wings working in the wall opening and hinged to the wall on opposite sides thereof, said wings being slidably extensible in a vertical direction.

Markets a New Furnace.

The recently organized Premier Warm Air Heater Company, Dowagiac, Michigan, is marketing a new warm air heater on the basis of guaranteed satisfaction.

The company says to the dealer, "If it doesn't come up strictly in accordance with the description given, you may fire it right back to us at our expense. That's



New Premier Furnace, Made by Premier Warm Air Heater Company, Dowagiac, Michigan.

a square deal for both of us. You don't take a chance of buying something you don't want and we don't take a chance of having a dissatisfied customer."

Naturally, before any product can be successfully sold to the consumer it must gain the good will of the dealer.

That means that it must have certain sterling qualities calculated to give service to the consumer.

In the long run the dealer's prosperity depends upon the kind and length of service which the commodity which he sells renders to his patrons.

The new Premier furnace, made by the Premier Warm Air Heater Company, Dowagiac, Michigan, is declared to have special features which insure long and satisfactory service.

Ample casing, standardized castings, water coil connection, and high lever shaker device are some of the things which are declared to individualize the new furnace.

The front is said to be full and massive. It is made

in two sections with patented constructed expansion slip joint to allow front to expand with body of heater.

The humidifier or water pan is located in front. It is convenient to fill and has a capacity of five gallons, thus insuring rapid evaporation and satisfactory humidifying of the air.

Full particulars and details of proposition to dealers can be had by writing to the Premier Warm Air Heater Company, Dowagiac, Michigan.

Registration for Heater Trade-Mark Is Procured.

United States Patent Office registration, under classification number 34, namely, heating, lighting and ventilating apparatus, not including electrical apparatus, has been granted to C. W. Sexton and Company, Incorporated, Waynesboro, Pennsylvania, for the trade-mark reproduced herewith. The particular description of goods to which it is applied is oil and gas heaters, warm air circulating radiators, and gas auto heaters, oil and gas garage heaters, chimney tops and ventilators. The Company claims use since June 17, 1920.

Sexco
134,435.

Illinois Heating Engineers Elect Officers.

It has been the good fortune of the Illinois Chapter American Society of Heating and Ventilating Engineers to have officers who take a real interest in the welfare of the membership and the promotion of the purposes of the organization.

In the recent election the Chapter continues to enjoy the same good fortune in the choice of men to administer its affairs. The following were selected as the official personnel for the ensuing term:

President: J. C. HORNUNG.

Vice-President: E. J. CLAFFEY.

Treasurer: AUGUST KEHM.

Secretary: B. NELSON.

Board of Governors:

JOHN HOWATT,

G. W. HUBBARD,

FRANK VAN INWAGEN.

A series of highly instructive meetings has been planned for the coming winter. The new officers pledge themselves to maintain the high standard of values for which the Chapter has been noted in its discussion of current topics of the profession.

Registers Heating Apparatus Trade-Mark.

Under number 120,508, the Société Des Moteurs Gnome Et Rhone, Paris, France, has secured United States Patent Office registration

GNOME
120,508.

for the trade-mark depicted herewith. The particular description of goods to which it is applied is heating apparatus comprising, namely, stoves, radiators, fire grates, boilers for heating purposes, and warm air furnaces for buildings. Application for registration was filed July 12, 1919.

Setting Standards for Industrial Dust Exhaust System.

The first installment of an article on this subject was published on page 28 of AMERICAN ARTISAN AND HARDWARE RECORD of October 16th.

The second installment follows herewith:

Before attempting to fix standards of air dustiness we desired to study the relation in actual practice between suction head in exhaust pipes and dust content of the air of the workroom. Our method of procedure was to vary the exhaust pressure at the grinding wheel, measure this pressure in terms of inches of water in a U tube, and then find the corresponding dust content of the air in the near vicinity of the machine. It is quite evident that under given conditions there must exist a more or less definite exhaust pressure, above which it is impossible to obtain further marked reductions in the dust content of the atmosphere. This quantity of dust may for the want of a better name be called the residual dust content of the air. This dust count (and weight) would probably be a fair standard and would agree closely with the ideas of Lanza and Higgins when they say:

"The most reasonable standard, then, appears to be one based on the quantity of dust that will remain in suspension after the best known methods have been put into use for its abatement."

At the very outset of our work it was agreed that the count of the number of dust particles in each cubic foot of air would not by itself give a complete record of the harmfulness of the dust. It was decided that the following information was essential: Number of particles, distribution by size, weight of dust per cubic foot of air, and the proportion of the dust that was organic or inorganic in nature.

The choice of a sampling method was greatly facilitated by the final report of "The Committee on Standard Methods for the Examination of Air" (1917).

Referring to the Palmer "water-spray method," the committee concludes: "The method is a new one and may no doubt be altered and improved in the future. In its present form, however, it has given entirely satisfactory results as tested in the laboratory of three members of the committee. We believe it to be the most promising method now available and recommend that it be used in ordinary sanitary investigations."

In an exhaustive report by Palmer, Coleman, and Ward we find under the summary of results with the three sampling method studies (Graham-Rogers plate, sugar filter, and water-spray methods):

The water-spray apparatus is superior to the sugar filter in—

(a) Making possible the collection of larger air samples in the same period of time, with the attendant greater accuracy in the count.

(b) Providing a dust sample whose content can be estimated by turbidity and weight as well as by counting.

(c) Being more portable.

(d) Simplifying and reducing the errors of tech-

nique in the substitution of distilled water as the filtering medium for solid soluble material, such as sugar or resorcin, whose dust content is a more variable factor.

And, lastly, Ward, speaking of this same method, says:

"It is firmly believed that the new method not only furnishes the simplest and most practical means of determining the dust content in the air in industrial establishments but that it also gives promise of the most constant results by which the required legal standards may be obtained as a pre-requisite to the enforcement of desirable conditions of wholesome air purity in factories, work-shops, and mines."

In view of this experience and these recommendations the Palmer water-spray method was chosen by us as the best method to employ.

The technique in the collection and counting of the dust particles followed closely that formulated by the committee on standard methods for the examination of air. In general it was as follows:

The Palmer apparatus was placed in position, 40 cubic centimeters of distilled water was added to the bulb of the machine, and the machine was started. It has been shown by Palmer that in a given atmosphere the dust count varies to some degree inversely with the size of the sample, as a result of errors in small samples due to the presence of dust in the water or on the slide. For this reason our samples were practically all of either 250 or 300 cubic feet of air. After each three or four minutes of operation water was added to the bulb to make up that lost by evaporation. At the end of the sampling time the water from the Palmer bulb was drained into an Erlenmeyer flask graduated to 100 cubic centimeters. The bulb was then rinsed with small additional portions of water and these were added to the flask. The total sample was then made up to 100 cubic centimeters. Suitable controls were made with the distilled water used in sampling, which controls received the same laboratory treatment as the dust samples.

When the sample arrived at the laboratory it was thoroughly agitated and two 1 cubic centimeter portions were removed to Sedgwick-Rafter counting cells. These cells were scrupulously cleaned and in most cases were examined empty under the microscope to detect the presence of any adventitious dust. After allowing the cell contents to settle, five counts were made on each cell, one at each corner and one in the center. The lens combination used in the microscope was Number 3 objective, a Number 3 eyepiece with an inserted eyepiece micrometer and a microscope tube length of 166 millimeters. With this magnification, which was approximately 84 diameters, the smallest square ruled on the eyepiece micrometer was found to be 0.02 millimeter on a side, which is the dimension of a "standard unit." In recording the dust count, the particles were grouped by sizes and recorded in counts of the number of particles in each of the following classes.

This article will be continued in next week's issue of AMERICAN ARTISAN AND HARDWARE RECORD.

Practical Helps for Tinsmiths

No Two Jobs Are Exactly Alike. Therefore, the Sheet Metal Worker Has to Meet Each Difficulty as It Comes. Send Your Problems to Us. Let Our Experts Help You.

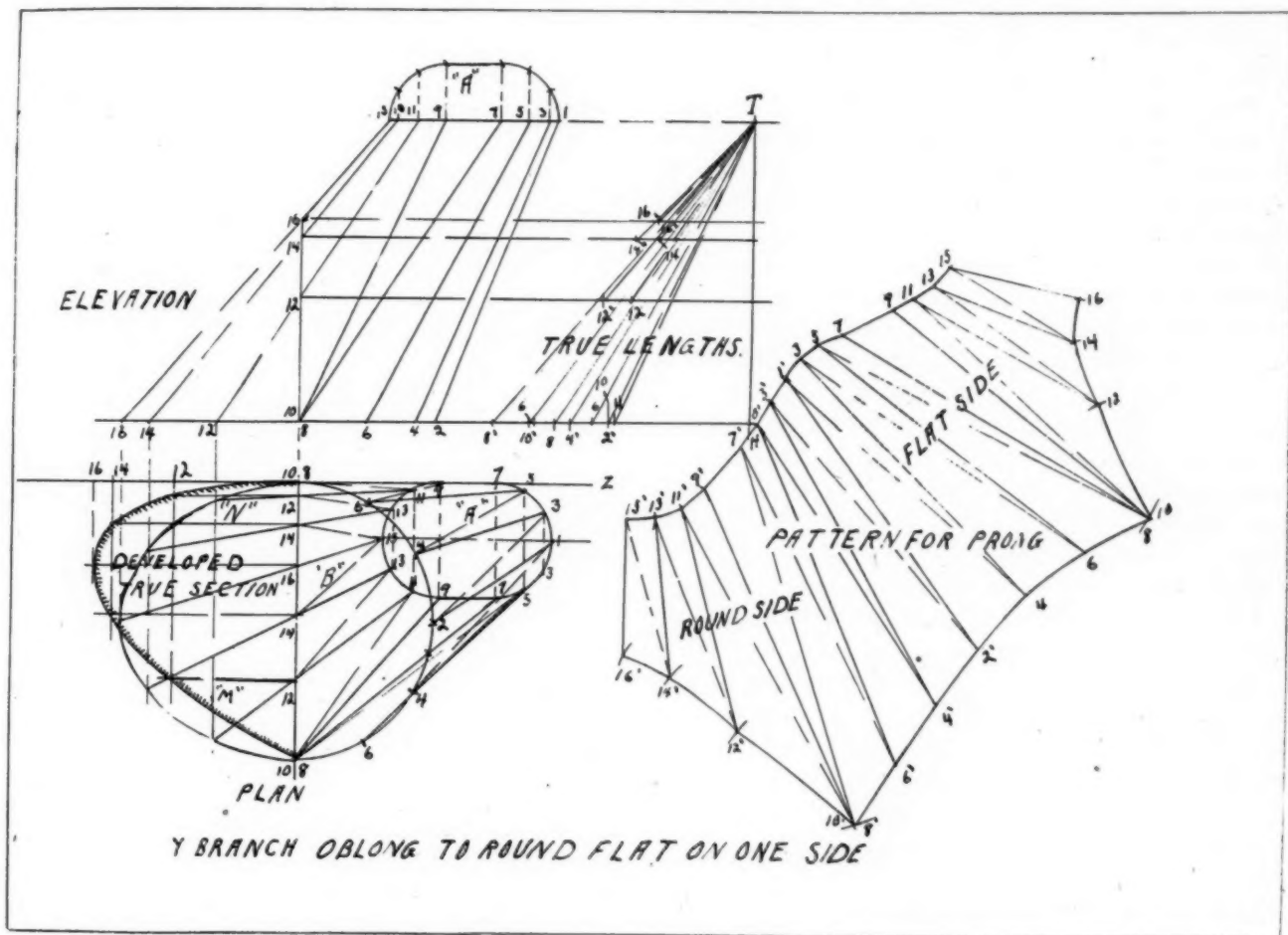
BRANCH ROUND TO OBLONG FLAT ON ONE SIDE.

By O. W. Kothe, Principal St. Louis Technical Institute and Instructor in the David Rankin, Jr., School of Mechanical Trades, St. Louis, Missouri. Written especially for American Artisan and Hardware Record.

Here and there it is required to make breechings, flat on one side. The shape of base can be made oblong, round or square as desired.

the side "M" is longer than the side "N." So pick the elevation altitudes as 10-12-14-16 and set them in plan as 10-12-14-16, drop lines and from each intersection in miter 8-8 project horizontal lines thereby establishing the points for drawing the shaded section "M"-N."

The true lengths are determined by using the elevation altitudes and the plan flare lines. So draw the line H-T and from points 10-12-14-16-I of ele-



Patterns for Branch Round to Oblong Flat on One Side.

The same holds good with the axis line of elevation. All these things are adjusted to suit the job.

First draw the elevation, and then draw 16-Z of plan, and place section "A" and "B" tangent with line 16-Z. The back part of plan of section "B" is developed in this case. But an elongated circle will do. This enables drawing the plan lines to conform to elevation as 1-2; 2-3; 3-4; 4-5 etc.

Join all lines properly, and where the throat lines cross the vertical miter line 8-8 of plan we have the intersections as 12-14-16 etc.

Observe these intersections show how the prong is pulled over and how the lines lengthen to take this in. This requires developing a full section because

variation project lines over to it. Then pick the plan lengths as 1-2; 2-3; 3-4; 4-5 etc., and set as H-2-3-4 etc.

Continue this until points 8-9 are set on this line. Then pick 9-10; 10-11, etc., from plan and set on line 12 of true lengths.

Repeat in this way until all lines are set in diagram of true lengths. When lines are drawn to the altitude T, the lines are developed.

To set out the pattern, start with line 1-2 and make equal to that line of true lengths. Then use girth spaces from "A" and "B" and set as 3-4 in pattern. Pick true length 3 and 4 from diagram and using 2 in pattern as center, cross arcs in point 3.

Now use the new point 3 as center, and true length 4 as radius, cross arcs in point 4.

Repeat in this way until points 15-16 on each half are finished. Allow edges for riveting and the pattern is done.

Plan Big Hallowe'en Party.

A noteworthy characteristic of the Michigan Sheet Metal Constructors' Association is its success in sustaining the enthusiasm of its membership month after month.

This desirable accomplishment is brought about by constant attention to the social phases of the work of the organization. The officers and members of the various locals take a pride in cultivating the spirit of fellowship and cooperation at all times.

They cleave to the conviction that business has for its main purpose the enrichment of life rather than the amassing of wealth. Indeed, they hold that profit justifies itself only when it becomes the means for better living and broader thinking.

In the carrying out of this policy the Association is greatly aided by the Traveling Salesmen's Auxiliary to the Michigan Sheet Metal Contractors' Association.

A practical example of this sort was given at a meeting of the Grand Rapids members of the Auxiliary held Saturday evening, October 16th at the Livingston Hotel, Grand Rapids, Michigan, at which they decided to give a Hallowe'en Dinner Party October 29th to the sheet metal workers of Grand Rapids at the same hotel.

The Committee appointed to make the arrangements for this affair and take charge of the entertainment consists of the following:

E. E. BEHLER, of W. C. Hopson Company, chairman;

C. F. NASON, of Milwaukee Corrugating Company;

THOS. I. PEACOCK, of R. J. Schwab & Sons Company.

In view of the well-known cleverness and talent for big things which characterize the members of this Committee, it is a foregone conclusion that the Hallowe'en Dinner Party will be a joyously strenuous event in the lives of the sheet metal workers of Grand Rapids.

Meeting of Springfield Local Studies Metal Shingles.

The possibilities of trade development as regards metal shingles were thoroughly canvassed at the regular October meeting of the Springfield Local of the Illinois Sheet Metal Contractors' Association.

In order to acquaint the members with a practical line of metal shingles showing all the variations of form and size, an exhibit of metal shingles was placed at the disposal of the Local for the occasion.

It contained a full assortment of samples and trimmings as manufactured by the Milwaukee Corrugating Company, Milwaukee, Wisconsin.

J. G. Hatch, salesman for the Milwaukee Corrugating Company was in charge of the display and gave very interesting talks in answer to various queries propounded by those present.

Mexico Is a Potential Source of Tin.

The failure to realize any successful tin mining operations in the United States under the war stimulus to the general mining industry, except one considerable operation in South Dakota, renews interest in the possibilities for the tin mining in Mexico, according to *The World's Markets*, published by R. G. Dun and Company.

The Mexican tin deposits have been long known. In fact they were worked, in pre-Cortez times and there has been a continuous production on a small scale in various parts of the Republic.

At no time has the total output of the Mexican tin mines reached any large proportions, and the industrial operations have been on a small scale, and mostly by the Mexicans.

About twenty-five years ago a Pittsburg syndicate undertook the development of tin in Durango.

The capital raised and expended was large, and the operations for the time were elaborate.

This undertaking failed, partly because of the extravagance of the ideas of its backers and certain internal financial features, but chiefly, of course, by reason of the failure to find tin in large commercial quantities.

This failure and the publicity it engendered in the United States had a great deal to do with the neglect of the Mexican tin resources by the aggressive North American capital for nearly a quarter of a century after.

Perhaps also the fact that there was practically no successful tin mining in the United States influenced the trend of American interests in the Mexican tin deposits.

During the later years of the Porfirio Diaz era, several serious and reasonably promising attempts to realize these Mexican tin deposits were made.

Notably among these were the operations in the western part of the State of Aguas Calientes, in the southern part of the State of Zacatecas and near San Luis Potosi.

Other promising but less accessible deposits, on the border of Durango and Zacatecas and in the south of Mexico, were controlled with the view of later developments.

It is known that the limited explorations which had been done on some of the more promising of these Mexican tin deposits resulted in favorable reports by engineers from the United States, and serious operations were planned.

It is expected that the resumption of mining in Mexico will result in a continuation of these operations and probably in the inauguration of new ones.

Well posted authorities express the opinion that tin mining in Mexico will be a successful branch of the industry.

Considering the widespread occurrence of tin as reported ore, it is also to be expected that tin mining will not be confined to a single locality.

There is no law against keeping your opinion to yourself in a hot dispute between your friends.

Gives Origin of Words Used In the Metal Trades.

It is related that on a railroad train an old lady said: "Conductor, what was that jolt?" and the conductor replied: "We just ran over a frog," whereupon the lady remarked, "Must have crushed the poor thing." She was not up on railroad nomenclature.

It used to be remarked that the 4-inch billet was one of the most useful inventions of the steel industry, says *The Steel and Metal Digest*. It is not so much so now, mills having become so specialized. The etymology of the word is all right, as it simply comes from the French *billette*, diminutive of *bille*, a log of wood.

There is no connection with the French *billet*, a note, or with the English word *billet* which is a diminutive of *bill*, a writing, as an assignment of military quarters.

Ingot, again, is a regular word, merely used by the steel industry as by other industries.

For decades "pig iron" was a perfectly logical phrase, though progress in the manufacture of steel has made it entirely irrational as to about 60 per cent of the present product.

Long ago the material was more commonly called "sow iron," the use of either word being of course a piece of imagery drawn from the sow and her litter of pigs.

On account of the use of "direct metal" whereby molten iron from the blast furnace is converted into steel without becoming solid, about 60 per cent of the "pig iron" made never is in the pig or sow form at all.

Coke and charcoal as applied to tin plate represent a greater amount of change in the industry.

The origin of the terms seems to be that at one time the material intended for the more transient use was made with iron produced by coke, and given a light coating of tin, while when more durability was required iron refined by charcoal was used, and a heavier coating of tin was applied.

Nowadays "coke tin plate" is material on which there is the lightest feasible coating of tin, while any heavier coating makes "charcoal" tin plate.

Thus, as is the case with 60 per cent of the "pig iron" the term survives while the process itself has gone out of use.

Skelp is simply such a strip of iron or steel as is used for making a welded tube or pipe.

Perhaps the term refers to the hammering necessary to make the weld, at any rate there is a Scotch word, used also in dialect English, *skelp*, to strike or beat.

This brings us to "pipes" and "tubes" which are used in the trade in rather a confusing way.

The distinction seems to be nothing but the development of trade practices.

There is no generic distinction between a welded boiler tube and a welded pipe except the difference in use and the difference in the material to adapt it to the use.

There are also some forms of tubes or tubing used in connection with wells, although made with a weld.

Seamless material, on the other hand, seems always

to be called tubes. In England on the other hand the term "tubes" covers what we call "pipe" in the United States.

It is not at all surprising that terms should be used in the iron and steel industry when there is no apparent reason at the present time why they should be, for we see changes in nomenclature or in the common use of words even in a period of a few years.

For instance, only 20 years or so ago it was common to talk of "soft steel billits" or "mild steel billits."

What is now ordinary steel had only lately supplanted wrought iron as the common material for rolling into finished forms.

Previously, for a long time, there had been crucible steel, made with a high carbon content and capable of taking a temper, hence it was natural to call the new form "soft" or "mild" steel.

Gradually the adjective was dropped, and the mere term "billets" was used, but the writer has been struck by the frequent appearance in recent years of the term "rolling billets" or "re-rolling billets," the limiting word not appearing to be altogether necessary.

The object, presumably, is to distinguish from "forging billets" but the time was that billets for rolling were so common in the market that if one said "billets" it was taken for granted he meant ordinary billets.

If he wanted to designate billets for forging all he needed to do was to say "forging billets," but if he didn't use the adjective the assumption was he meant the other or common kind.

The word "finished" as applied to steel has rather a definite meaning in the trade. Of course steel never sees its finish until it gets lost or rusts away or is used as scrap, but the steel trade generally uses the word "finished steel" to designate steel not so much in the form in which the steel industry gets through with it as in the form it has after its last hot rolling.

According to this view, which is not always followed because the trade is rather loose in its use of words, skelp would be "finished steel" and pipe something made from the finished steel, while a wire rod would also be "finished steel" and wire or nails a still more advanced product.

Not many years ago certain materials were commonly called "unfinished steel" and rarely "semi-finished steel" but the tendency of late has been to employ the latter term, which is the one commonly used in England, the most common forms being blooms, billets, slabs and sheet bars, all of which are forms of steel that have already been rolled but are to be subjected to further rolling.

Even the term "crude steel" used to be employed frequently, including ingots, which have been cast but have not been rolled at all, but the term now is not nearly so common.

Perhaps the best form would be to say "ingots" when ingots are meant, and "semi-finished" when something is meant that has had some rolling but is to have more.

To put a fine point on it, a billet intended to rolling would then be a "semifinished" product but a billet intended to forging would be a "finished" product.

Bill Stechler Shows His Boss How to Save Money.

There was fire in Bill Stechler's eye when he came back to Frank Morton's shop from a job in Main street.

"I'm sick and tired of filing this darn soldering copper. Every time I——"

"What's the matter, Bill?" his boss interrupted. "Did you put too much salt on your pork chops at noon? You've got a grouch on like a man with a Kentucky thirst in an empty cellar."

"Even Douglas Fairbanks or Fatty Arbuckle would develop a man-size grouch if he had to work with lump sal ammoniac that crumbles and corrodes all the



**Showing How Speco Can Be Used with One Hand While
the Other Hand is Free for Holding
Pieces in Position.**

metal work on the job and makes the soldering iron look like a dozen cases of small pox rolled into one."

"Well, you're not the only one, Bill, that has the same trouble. Soldering is soldering and sal ammoniac has got to be used, so you better make the best of conditions."

"That's just where you're a thousand miles off the road, Frank," retorted Bill Stechler. "Every other trade and business in the country is making improvements and doing away with old fashioned wasteful methods."

"I don't see why in Sam Hill tinsmiths have to put up with ways that were ancient in the days of Methuselah," he continued.

"It's a cinch you can't use a hunk of cheese or piece of oleomargarine for cleaning or tinning a soldering iron," was the sarcastic rejoinder of the boss.

"Yes, I know all that kindergarten stuff," said Bill. "That's just what's the matter with a lot of tinsmiths and their bosses."

"They've never got beyond the kindergarten class and they stick to old methods like a burr to a cow's tail," he added.

"The trouble with you, Bill, is that you expect your soldering iron to work like a phonograph or a player piano——"

"You know blame well that I'm not looking for soft snaps," hotly interrupted Bill.

"What I'm kicking about," he continued, "is the kind of sal ammoniac you're using in this shop. I don't know where you get it. Maybe you buy it in a——"

"I buy just as good sal ammoniac as any sheet metal man in this burg," Bill's boss interposed.

"Maybe you think so," said Bill, "but I know different."

"When you're out on the job," he continued, "and you're working on something that requires holding pieces in position, you don't feel much like saying prayers when you pick a soldering iron and find it burnt and dirty and that it must be cleaned and tinned."

"I suppose that you want me to send a uniformed attendant along with you to clean and tin the coppers for you," answered Bill's boss with heavy irony.

"Yes, I do, if you're going to keep on using the bum stuff that you have now," Bill replied spiritedly.

"But," he added, "you can save the cost of the uniform and wages of the attendant if you get some decent sal ammoniac."

"I was talking to Tom Jones the other day," he continued, "and he told me that they have got the right dope at his shop and——"

"Oh, they have, have they?" sneered Bill's boss.

"Yes, they have and it's in a solid block. It doesn't crumble. It doesn't give half the amount of fumes as the old lumpy stuff. You can carry it in your kit. It doesn't pit the irons. You can use it with one hand."

"Well, that's a new one on me," said Frank Morton. "Where do you get it? What's the name of it?"

"It's called 'Speco,'" said Bill, "and it's made by the Special Chemicals Company, Highland Park, Illinois."

"And it is a money-saver, too," he added. "Tom Jones tells me that it outlasts five times its weight of any sal ammoniac he ever used. Besides, it saves filing. It doesn't pit the iron. It saves time and it saves copper. You can strap it on your furnace and have it convenient always on the same spot with the irons. You can clean and tin the soldering iron with one hand when using this block of Speco sal ammoniac because the cake is heavy enough not to slip. Besides, as Tom Jones says, its flat surface and square shape gives a good surface to rub the iron on."

"Tom Jones tells me," he continued, "you can leave a little solder in the groove in the Speco all the time and this makes it possible to tin as you clean."

"Well, that sounds pretty good to me," said Frank Morton, "specially if you can clean the iron with one hand when you're using a block of this new sal ammoniac or Sp——"

"Speco is the name," said Bill, "Speco, and Tom Jones says his shop buys it at Porter's Hardware Store."

"Well, I'm willing to try anything once," said Frank Morton. "I'm going to get some of this Speco principally because I hate to see you with a grouch."

"Well, don't get it only on my account," said Bill. "It'll save you money. You don't need two hands with Speco since you lay Speco on the bench or strap

it on the furnace. When we're out on a job, you're paying us for time. You can handle more jobs if you can save more time.

"Of course," he concluded, "I'm strong for this Speco because I hate messy work and I hate wasting time filing the pits out of my soldering iron when there's no earthly reason why I should do so."

"All right, Bill, all right," said Frank Morton. "We will get the Speco and if it is as good as you say it is, I will boost it for all I am worth."

Well Known Ohio Sheet Metal Manufacturer Passes Away.

Benjamin P. Obodyke, of Cincinnati, Ohio, a well-known manufacturer of galvanized iron products, passed away at the Presbyterian Hospital in that city, after a brief illness.

He was eighty-two years of age, and was active in business until a year ago, when he withdrew as president of the Obodyke Company, Incorporated, 1217 Callow Hill Street, Cincinnati, Ohio.

Mr. Obodyke was prominent in Masonic circles, and took keen interest in the Manufacturers' Club. He is survived by three sons and a daughter.

Corrects an Oversight in Automobile Patterns.

The subjoined correspondence is helpful in two ways.

First, it shows how closely good workers read and study these pages and, therefore, sets an example to all mechanics.

Secondly, it proves that a reliable expert is all the more reliable because he is willing frankly to acknowledge and correct any defects in his instructions or lessons:

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I have been an interested reader of your invaluable paper for quite a number of years and am a pattern cutter by trade.

I especially take great interest in Mr. Kothe's articles under "Practical Helps for the Tinsmith."

In issue of September 25th on page 31 Mr. Kothe shows how to develop patterns for back body of an auto.

Everything seems correct to me, only the pattern for side of body seems incorrect to me.

He develops the pattern from part plan which shows all lines foreshortened and not true in length.

I would like to have the author explain how he can develop a correct from a foreshortened view.

In my opinion, he must construct another view which shows all lines in true length which is termed a diagonal elevation before one can develop the correct pattern.

I do not practice criticism, but for the benefit of other interested readers, I take the privilege of asking if Mr. Kothe would kindly explain this drawing which seems erroneous to me.

There is no doubt I am sure that the author has overlooked this little error.

E. A. DINGLER.

Joliet, Illinois, October 11, 1920.

The seeming error in the automobile pattern to which Mr. Dingler refers was referred to Mr. Kothe for explanation. His letter, which follows, clears up the matter thoroughly.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

In the September 25th issue, the writer omitted to explain a feature about that rear body automobile hood.

On inspection we observe the elevation raises and the plan spreads on an angle, and this would ordinarily require a developed diagonal elevation.

But owing to the very shallow raise, and the slight spread the difference produced in length through a diagonal elevation would not exceed a quarter to a half inch.

So by allowing an extra lap of say a half inch on each end, the side can be fitted as well as otherwise and save considerable time in developing.

The oversight occurred by letting the large laps slip my mind when inking in the drawing, and this omission brought no response while dictating the instructions.

So trusting this will set the readers right, I am

Yours truly,

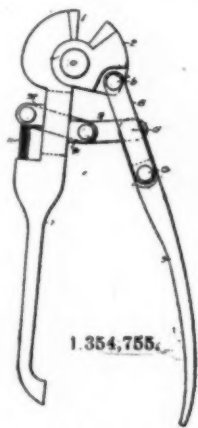
O. W. KOTHE,

Principal St. Louis Technical Institute.

St. Louis, Missouri, October 14, 1920.

Gets United States Patent Rights for Shears,

Under number 1,354,755, United States patent rights have been obtained by Ivar Hultman, Neglinge, Saltsjobaden, near Stockholm, Sweden, for shears for cutting sheet metal, wire, bolts, etc., described in the following:



A pair of shears comprising a lever having a jaw at one end, a second jaw pivotally connected to and carried by the first named jaw, a second lever pivotally connected to the first named lever, a movable supporting element on said second lever, and a link connected to said supporting element

and also pivotally connected with said second jaw.

Obtains Employment through AMERICAN ARTISAN.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Please take out my advertisement for position as tinner and plumber. I have secured a very good job through the advertisement, for which I thank you very much.

Sincerely yours,

HENRY BAILEY,

Rock Island, Illinois, October 20, 1920.

The store that shows a proper appreciation of its customers' small orders is the store that is likely to get their large orders.

Instructive Notes and Queries

The Service of This Information Bureau Is Free to Our Subscribers and They Are Urged to Use It Freely.

TIN SMELTING CAPACITY HAS INCREASED SINCE THE WAR

No smelters existed in the United States for the treatment of tin ore before the war.

The tin smelters developed since the war by American capital in the United States and Bolivia have an annual capacity of 18,000 metric tons.

This capacity is being enlarged and soon should be able to absorb the entire output of Bolivia, but Chilean capital has established a smelter at Arica and American smelters may soon find themselves short of ore.

In 1918, the last year for which official statistics are available, the total amount of metallic tin obtained from American concentrates amounted to 68 short tons, of which 67 were drawn from the Seward Peninsula, Alaska.

The tin imported that year reached the record quantity of 82,854 short tons, an increase of nearly 5,000 tons over the figures of 1917.

Gives Oxy-Acetylene Process Of Welding and Cutting.

The oxy-acetylene process of welding and cutting is an adaptation of a very ancient art, which was first practiced by the Egyptians, according to the *Sheet Metal Workers' Manual* by L. Broemel.

The early process consisted of heating metals of a low melting point by means of a torch, using a crude fuel gas and drawing the necessary oxygen from the air.

The modern process of blowpipe welding is somewhat similar; but it is applied successfully to the welding of high-melting-point metals as well.

It involves the use of dissolved acetylene and compressed oxygen. These gases, burned in a suitable blowpipe, produce a flame temperature of approximately 6,300 degrees Fahrenheit, which is capable of bringing metals to a molten state very rapidly.

Blowpipe welding is generally known as "auto-genous" welding. Autogenous welding, however, has gradually come to be understood as meaning the oxy-acetylene blowpipe welding process, which, in commercial fields, has practically supplanted the older methods of blowpipe welding, such as oxy-hydrogen and oxy-coal-gas processes.

The oxy-acetylene process of welding consists of heating the pieces of metal to be joined, at the point of weld, to a molten state by means of the oxy-acetylene flame, causing them to run together or "fuse" into one homogeneous piece.

A rod or stick of special metal (commonly called filling or "filler" rod) is used to fill in between pieces of new metal being welded together.

This process must not be confused with soldering or brazing, as the welded joint is one in which the

parts joined together are fused into a solid piece of the same structure and character throughout.

A soldered or a brazed joint is one in which a new metal, having certain adhesive qualities, is used as a binder. This new metal adheres to the parts to be joined, but does not fuse with them, as its melting point is much lower than that of the parts being operated upon.

In the fusing process, or the melting together of the pieces welded, lies the strength, neatness, and economy of the oxy-acetylene welding process, which is rapidly supplanting the older riveting and soldering methods.

Describes Method of Soldering.

The process of soldering consists of welding together pieces of metal by means of another metal of lower melting point. Soft soldering may be taken to mean the uniting of pieces of metal with fusible alloys of tin and lead.

In the operation of soldering, which is done by using soldering coppers for applying the heat, the solder must be fused to the pieces which are being joined.

This is done by raising the temperature of the solder and the parts to be soldered to the fusing point.

The solder is applied and sweated in by holding a hot soldering copper in contact with the seam until a correct fusing temperature has been attained, with the result that the metals fuse together into one uniform mass, making a perfect joining at every point.

The absolute necessity of heating the parts to be soldered and raising them to the correct fusing temperature can not be too strongly emphasized.

* * *

Auto Radiator Coils.

From A. Kaiser, 622 East Lincoln Highway, DeKalb, Illinois.

I would like to know where I can purchase coils for auto radiators.

Ans.—Ideal Sheet Metal Works, 213-223 Morgan Street, Chicago, Illinois; F. L. Curfman Manufacturing Company, Maryville, Missouri; International Radiator Company, 1507 South Michigan Avenue, Chicago, Illinois.

Smith "Little Giant" Water Heater.

From John C. Distler, Mishawaka, Indiana.

Where can I buy the Smith "Little Giant" water heater which is placed inside of furnace firepots and used as a coil

Ans.—Charles Smith, 7336 Vincennes Avenue, Chicago, Illinois.

Carpenter's Butt Chisels.

From Clark Hardware Company, Windom, Minnesota.

We would like to know where we can procure carpenter's butt chisels of Swedish manufacture.

Ans.—Wer-Nel Sales Corporation, 29 South La Salle Street, Chicago, Illinois.

Illustrations of New Patents

Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.

1,353,218. Door Controlling Device. Edward S. Coffman, Clifton Forge, Va., assignor to Frank E. Stebbins, Washington, D. C. Filed November 6, 1909. Serial No. 526,602. Renewed January 16, 1920.

1,353,219. Door Check and Closer. Thomas E. Collins, Chicago, Ill. Filed December 22, 1919.

1,353,233. Flytrap. George J. Guertler, Cincinnati, Ohio. Filed April 2, 1918.

1,353,246. Pipe Wrench. Arthur Wellington Kiefer, Chicago, Ill. Filed January 5, 1920.

1,353,265. Gas Saving and Heat Retaining Device. Heikichi Oshige, Santa Barbara, Calif. Filed March 25, 1920.

1,353,270. Ladder. Chester A. Rich, Cincinnati, O., assignor to The Rich Pump Company, Cincinnati, Ohio, a Corporation of Ohio. Filed March 21, 1919.

1,353,282. Jar Lifter. Adelia G. Shrauger, Odanah, Wis. Filed September 25, 1919.

1,353,302. Washington Machine. John J. Zofsak, Greensburg, Pa. Filed November 18, 1916. Serial No. 132,182. Renewed February 10, 1920.

1,353,314. Portable Stove. Frank Chapman, Providence, R. I. Filed August 25, 1919.

1,353,348. Portable Hand Lamp. Harry M. Koretzky, Brooklyn, N. Y. Filed June 18, 1919.

1,353,353. Work Holding Clamp. Harry Ingraham Lavers, West Somerville, Mass. Filed November 26, 1919.

1,353,365. Wire Stretcher. Barley Webb and William A. Gardner, Pinetops, N. C. Filed October 2, 1919.

1,353,388. Door Latch and Burglar Alarm. Alfred A. Fisk, Pomona, Calif., assignor of one-half to A. B. Davis, Pomona, Calif. Filed September 23, 1918.

1,353,428. Clinker Extractor. Gustaf Selander, Chicago, Ill. Filed September 22, 1919.

1,353,445. Combination Tool. Jacob Ziegler, Coffeyville, Kans. Filed November 15, 1918.

1,353,447. Door Latch. Edward B. Barr, Newton, Kans. Filed October 4, 1919.

1,353,471. Electric Iron. Joseph A. Guyer, Marion, Ind. Filed March 24, 1919.

1,353,490. Safety Pocket Knife. John Pantalek, Modesto, Calif. Filed August 19, 1915.

1,353,494. Attachment for Digging Implements. Robert Risch, Milwaukee, Wis. Filed August 16, 1919.

1,353,543. Portable Door and Window Fastener. Christian P. Schoelkopf, St. Paul, Minn. Filed March 5, 1919.

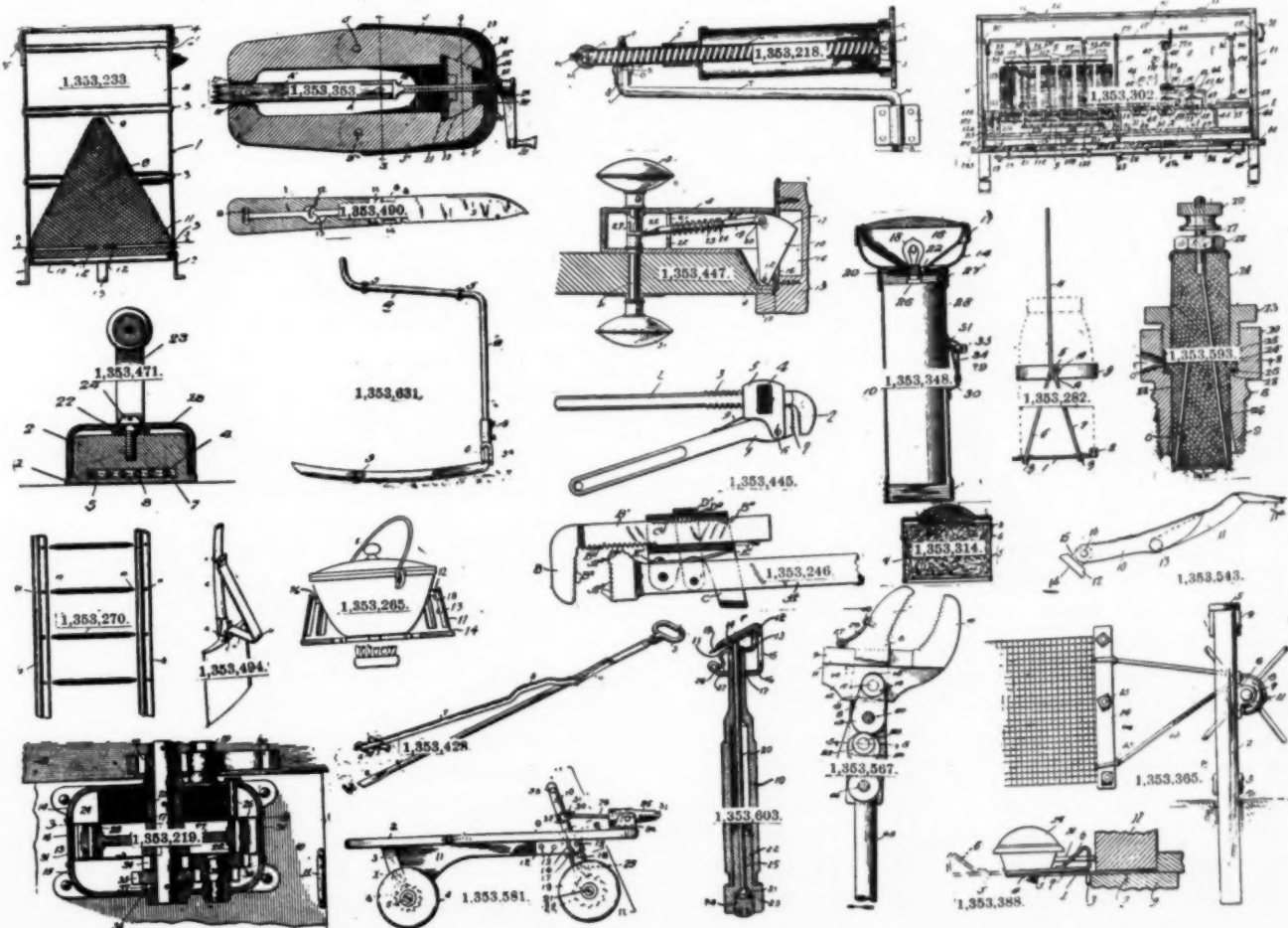
1,353,567. Wrench. James L. Dillon, Leavenworth, Kans., assignor of one-half to Frederick L. Wendler, St. Louis, Mo. Filed November 25, 1919.

1,353,581. Toy Vehicle. Joseph G. Gavlak, Monongahela, Pa. Filed April 30, 1919.

1,353,593. Spark Plug. John Jorgenson, Racine, Wis. Filed March 15, 1919.

1,353,603. Safety Razor. Seth G. Malby, Derby, Conn., assignor to Charles H. Jockmus, Ansonia, Conn., doing business as Ansonia Manufacturing Company. Filed March 22, 1920.

1,353,631. Scythe-Snath. D. Fellows Collicutt, Columbia, S. C. Filed March 3, 1917. Renewed August 4, 1920.



Weekly Report of the Markets

General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

STEEL INDUSTRY OPPOSES PRICE REDUCTIONS ON CONTRACTS.

It is generally admitted in the steel trade that a reduction in prices of semi-finished and finished products is inevitable as regards the independents.

The belief is that such reduction will reach the level of the schedule maintained since March, 1919, by the leading interest.

However, steel and iron makers are in no hurry to revise their schedules downward, and as consumers will not buy on the present market a deadlock exists with both sides holding strong.

The principal factor keeping prices at their present high level is, of course, the high cost of production.

During the past year wages have advanced with no corresponding increase in labor efficiency.

Transportation rates have also increased, and when it is remembered that nearly six tons of raw material must be assembled at a common point to make one ton of steel it will be readily seen that this is no small factor.

The iron and steel export trade of the United States was thrown into a flurry by the strike of the British coal miners, which has been pending for so long.

Expectations of cancellations on existing orders and a general cessation of business has caused many export houses in America to withdraw their inquiries.

More than a million miners are already out. Iron and steel plants in Yorkshire are already closing down.

Many of the men admit that they may be beaten, but maintain they will stay out for at least six weeks.

It is reported that out of the total number of ways in American shipyards capable of producing steel vessels 52 per cent are now idle.

This reflects the true conditions of American shipbuilding today—a contraction from the enormous expansion that the industry enjoyed during the emergency period.

In the face of these facts there is no wonder that there has been a falling off in the demand for ship plates and an easing off in the price.

Steel.

The invasion of the domestic steel market by Belgian mills is already an accomplished fact.

Several interests are offering finished steel products c. i. f. (cost, freight, and insurance) Antwerp or Atlantic Coast ports in the United States, and while some of this material is offered at prices above the present market here some of it is cheaper.

For instance, round bars from one-quarter to five-sixteenths inch are being offered at 5.10 cents New York, duty paid, as against the present market price of less than 4 cents, but billets can be imported and sold

c. i. f. New York at more than \$5 a ton under the market.

Copper.

Some of the larger copper producers have withdrawn quotations, while others are willing to sell at 17 cents delivered, over the remainder of the year.

In the outside market 16.25 is the average quotation for spot and October and 16.37½ for November and December. One producer is reported as offering copper at 16 cents.

Eleven of the larger copper producers reported a reduction in output for the month of September, while one reported the same production and another an increase.

During September, fourteen of the larger companies produced a combined total of 83,320,644 pounds, as against 100,672,920 pounds in August, showing a decrease of 17,352,276 pounds or more than 17 per cent.

Sheet copper, mill base, declined one cent per pound in the Chicago market this week. The present quotation is 26½ cents.

Tin.

Due to the crisis in the English labor situation, new low levels have been established in the London and domestic tin markets.

Prices in the domestic market declined from 3 to 3¼ cents a pound and are now the lowest they have been since 1916.

In the domestic market all positions of Straits shipments declined ¾ cents, shipments between July and September, inclusive, being quoted at 38.25, September-October at 38.50, October-November, 39; November-December, 39.12½, and December-January at 39.37½.

Spot and October deliveries of Straits declined from 41.50 to 38.25 and the same deliveries of the 99 per cent grade from 40 to 37 cents.

A further reduction has taken place in Chicago tin prices. Pig tin is now quoted at 43¾ cents per pound and bar tin at 45¾ cents.

Lead.

Several large independent producers have announced that they have their entire output booked for the remainder of the year and are out of the market.

There are few inquiries in the market and fewer sales, and dullness is the characterizing feature.

The London market has shown practically no change during the past two weeks, both spot and futures being quoted daily at a pound sterling price of which the New York equivalent has been 5.40 cents a pound at the rate of exchange current at the close of London trading for the day.

American Pig Lead and Bar Lead declined 40 cents per 100 pounds in the Chicago market. They are now quoted at \$7.60 and \$8.35 respectively. Sheet Lead full coils went down from \$11.50 to \$11.00 per 100 pounds and cut coils from \$11.75 to \$11.25 per 100 pounds.

Solder.

The decline of prices is reflected this week in the Chicago solder market by a reduction of 75 cents per 100 pounds. The prevailing figures are: Warranted 50-50, per 100 pounds, \$29.25; Commercial 45-55, per 100 pounds, \$27.25; and Plumbers', per 100 pounds, \$25.25.

Zinc.

In the zinc market business is almost at a standstill and prices are more or less nominal.

Producers met late last week to draw up a definite plan of curtailment in the tri-state field which will reduce the output of lead from the present rate of 11,000 tons a week to 7,000 tons.

The plan is to have each company maintain its organization but to operate only four or five days a week.

Such an action would probably force higher prices but the recent drop in English quotations makes possible and profitable further reshipments and even importations of zinc from abroad.

Zinc in slabs has declined 25 cents per 100 pounds in the Chicago market, going down from \$8.50 to \$7.95.

Sheets.

The principal bone of contention in the finished steel market is sheets.

Automobile manufacturers have been making a persistent campaign to break the market and have met with determined resistance for the most part.

The strength against them lies in the form of contract used and adhered to by the National Association of Sheet & Tin Plate Manufacturers, composed of practically all the independent sheet makers and there are no indications that any of these members are departing from the provisions of this contract.

True, there has been some paring of prices during the past two or three weeks, but some of the Pittsburgh mills which are offering black sheets on the basis of 6.50 cents have withdrawn the quotation and now appear to be in a better position for the remainder of the year.

If automobile manufacturers can not obtain materials cheaper now that they have put into effect a radical cut in the price of their product the only alternative is to reduce wages.

Tin Plate.

Inquiries for tin plate are few in number and the market remains stationary.

It is declared that some of the producers will carry their bookings well into next year but makers have not taken new tonnage for this delivery and the leading interest will not open its books until the middle of November.

Recent sales for last quarter have been light and

while it is reported some lots for this delivery have been sold as high as \$9 per base box, it is probably true most of this has been for export and this figure is not representative of the market.

Old Metals.

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: old steel axles \$33.00 to \$34.00; old iron axles, \$40.00 to \$41.00; steel springs, \$23.50 to \$24.00; No. 1 wrought iron \$20.00 to \$21.00; No. 1 cast, \$30.50 to \$31.00; all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 10 cents; light brass, 6 cents; lead, 5 cents; zinc, 4¼ cents; cast aluminum, 12½ cents.

Pig Iron.

The dominant and practically only feature in the pig iron market today is the volume of reselling in the large centers, with a coincidental dropping off of business being booked by furnace interests.

The Birmingham market, which has been the lowest in the country, at \$42, for some time past, has been undersold \$4 a ton, and Southern iron has been resold by overstocked foundries in Chicago \$4.50 a ton under the market.

Basic iron, valley base, has been sold at \$5.50 below the market quoted some two weeks ago.

The feeling in the pig iron industry is expressed quite generally that if the revival of activity or recession of costs does not come by the time that present contracts expire, production will necessarily be curtailed until such time as costs and selling prices assume a reasonable ratio.

It is the general opinion in the Mahoning Valley that the iron ore requirements of furnace interests will be fully met this winter on account of the heavy stocks that have been recently piled up at the lake docks.

Due to a shortage of open top cars ore has of necessity been dumped at the docks, where it has accumulated against the time it could be shipped and the normal rate of movement to the valley thereby reduced of late.

Consumers are confident, however, that after the close of navigation on December 1 a greater than normal movement will be effected to bring the stock piles at the furnaces up to the usual tonnage.

This week several additional Ohio and Southern furnaces have gone out of blast, according to the market report of the Matthew Addy Company, Cincinnati, Ohio. Since the beginning of the month so many furnaces have gone out that there is a notable decline in production. Some of the furnaces have been put out simply because repairs were necessary, but others have gone out because of a lack of orders.

No one is willing, at the present high costs of manufacturing pig iron, to make and pile it. That would be a speculation which would speedily run into such sums of money as to make the bravest stop and take notice. And yet it is quite apparent that if production keeps on declining, presently the thing will be over done and an actual shortage of pig iron will develop.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

The prices and discounts quoted on this and the following pages, are, for the most part, subject to change without notice. Owing to the unsettled conditions of the markets and the shortage of materials it is practically impossible for any manufacturer to guarantee his prices for any given length of time.

METALS		TIN.		AUGERS.		BEATERS.	
PIG IRON.		Pig tin .....42 3/4 c		Boring Machine .....40 @ 40 & 10 %		Carpet. Per doz.	
Northern Fdy. No. 2		Bar tin .....45 3/4 c		Carpenter's Nut.....50 %		No. 7 Tinned Spring Wire..\$1 10	
Southern Fdy. No. 2				Hollow.		No. 8 Spring Wire Cop-	
Lake Sup. Charcoal...				Bonney's .....per doz, 30 00		pered 1 50	
Malleable				Post Hole.		No. 9 Preston..... 1 75	
				Iwan's Post Hole and Well...30 %		Egg. Per doz.	
				Vaughan's, 4 to 9 in.		No. 50 Imp. Dover.....\$1 10	
				.....per doz. \$14.00		No. 102 " " Tined 1 35	
				Ship.		No. 150 " " hotel 2 10	
				Ford's, with or without		No. 10 Heavy hotel tinned 2 10	
				screw .....Net list		No. 13 " " " 3 30	
						No. 15 " " " 3 60	
						No. 18 " " " 4 50	
						Hand.	
						8 9 10 12	
						Per doz.\$11 50 13 00 14 75 18 00	
						Moulders'.	
						12-inch .....Per doz. 20 00	
						BELLS.	
						Call.	
						3-inch Nickered Rotary Bell,	
						Bronzed base.....per doz. \$5 50	
						Cow.	
						Kentucky .....30 %	
						Door. Per doz.	
						New Departure Automatic \$7 50	
						Rotary.	
						3 -in. Old Copper Bell... 6 00	
						3 -in. Old Copper Bell,	
						fancy 8 00	
						3 -in. Nickered Steel Bell 6 00	
						3 1/2 -in. Nickered Steel Bell 6 50	
						Hand.	
						Hand Bell polished List plus 15 %	
						White Metal..... " 15 %	
						Nickel Plated..... " 5 %	
						Swiss " 10 %	
						Miscellaneous.	
						Church and School, steel	
						alloys .....30 %	
						Farm, lbs...40 50 75 100	
						Each ....\$3 00 3 75 5 50 7 25	
						BEVELS, TEE.	
						Stanley's Rosewood handle, new	
						list .....Nets	
						Stanley iron handle.....Nets	
						BINDING CLOTH.	
						Zincd .....55 %	
						Brass .....40 %	
						Brass, plated .....60 %	
						BITS.	
						Auger.	
						Jennings Pattern .....Net	
						Ford Car.....List plus 5 %	
						Ford's Ship..... " 5 %	
						Irwin .....35 %	
						Russell Jennings.....plus 20 %	
						Clark's Expansive .....33 1/2 %	
						Steer's " Small list, \$22 00..5 %	
						" " Large " \$26 00..5 %	
						Irwin Car.....35 %	
						Ford's Ship Auger pattern	
						Car .....List plus 5 %	
						Center .....10 %	
						Countersink.	
						No. 18 Wheeler's..per doz. \$2 25	
						No. 20 " " " 3 00	
						American Snailhead " 1 75	
						" Rose.... " 2 00	
						" Flat.... " 1 40	
						Mahew's Flat.... " 1 60	
						" Snail.... " 1 90	
						Dowel.	
						Russel Jennings.....plus 20 %	
						Gimlet.	
						Standard Double Cut Gross \$8 40	
						Nail Metal Single	
						Cut .....Gross \$4 00—\$5 00	
						Reamer.	
						Standard Square.....Doz. 2 50	
						American Octagon... " 2 50	
						Screw Driver.	
						No. 1 Common..... 40	
						No. 26 Stanley..... 75	

BLACKING, STOVE. (See Polish)**BLADES, SAW.****Wood.**

Disston 30-in.

Nos.	6	66	26
	\$9 45	\$10 05	\$9 45

BLOCKS.

Wooden	20%
Patent	20%

BOARDS.

Stove.	Per doz.
24x24	13 60
26x26	16 05
28x28	18 85
30x30	21 30
33x33	25 50
36x36	30 50

Wash.

No. 760, Banner Globe, (single)	per doz.	\$5 25
No. 652, Banner Globe, (single)	per doz.	6 75
No. 801, Brass King per doz.		8 25
No. 860, Single—Plain Pump		6 25

BOLTS.**Carriage, Machine, etc.**

Carriage, cut thread, $\frac{3}{4}$ x6 and sizes smaller and shorter	40 & 10%
Carriage, sizes larger and longer than $\frac{3}{4}$ x6	+15%
Machine, $\frac{3}{4}$ x4 and sizes smaller and shorter	50%
Machine, sizes larger and longer than $\frac{3}{4}$ x4	40%
Stove	5-10%
Tire	40-5%

Mortise, Door.

Gem, iron	5%
Gem, bronze plated	5%

Barrel.

Cast	Nets
Wrought	"
Wrought, bronzed	"

Flush.

Wrought	"
---------	---

Spring.

Wrought	"
Wrought, heavy	"

Square.

Wrought	"
---------	---

BOXES.

Mail. No.	2	4	10
Per doz.	\$18 00	23 00	29 00

Mitre.

Stanley's	Net Prices
Stearns, No. 2.	per doz. \$48 00

BRACES, RATCHET.

Goodell-Pratt No. 408	\$4 60
" " No. 410	4 80
" " No. 412	5 00
V. & B. No. 444 8 in.	\$4.65
V. & B. No. 333 8 in.	4 30
V. & B. No. 222 8 in.	4 00
V. & B. No. 111 8 in.	3 50
V. & B. No. 11 8 in.	3 05

BURRS, RIVETING.

Copper Burrs only	25% above list
Tinners' Iron Burrs only	30%

BUTTS.

Cast Iron	7 1/2%
Wrought Bronze, No. 175 AC	\$1 75
Steel, Bright, Narrow	15-7 1/2-5%
Steel, Japanned, Narrow	List+65%

CALIPERS.

Double	Nets
Inside and Outside	"
Wing	"

CALKS.

Logger's Boot.	
(Lufkin R. Co's.), per M.	\$7 00

Toe.

Blunt and medium, 1 prong	per 100 lbs. \$6 20
Sharp, 1 prong, per 100 lbs.	6 70

CANS.**Milk.**

Ohio.			
Gals.	5	8	10
Each	\$3 65	\$4 45	\$4 70
Gem.			
Gals.	5	8	10
Each	\$3 85	\$4 95	\$5 20
Jersey.			
Gals.	5	8	10
Each	\$4 15	\$5 60	\$5 90
Holstein.			
Gals.	5	8	10
Each	\$4 15	\$5 60	\$5 90

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.	
Diamond, Regular	each, Nets
Diamond, Sling	" "

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing.	50&10%
Bed	40%

Common Plate.

Brass Wheel	15%
Iron and porcelain wheels, new list	50%
Philadelphia Plate, new list	50%
Martin's	40%

CATCHERS, GRASS.

No. 160S, per doz.	\$12 25
No. 165S, " "	14 01

CEMENT, FURNACE.

American Seal, 5 lb. cans, net	\$0.45
" " 10 lb. cans, "	90
" " 25 lb. cans, "	1 87
Asbestos, 5 lb. cans	45
Pecora, 5 lb. cans	45
" 10 lb. cans	90
" 25 lb. cans	1 87

CHAINS.

Breast Chains.	
With Slide	doz. pairs, 5 50
Without Slide	" 5 06
Doubleslack	" 9 35
With Covert Snaps	" 6 35

Picture Chains.

Light Brass, 3 ft. per doz.	\$1 25
Heavy Brass, 3 ft. "	1 75

Sash Chain.

(Morton's)

Steel, per 100 ft.	
0	\$2 50
2	3 10
1	3 60

Champion Metal.

OR	5 40
2H	5 60
1R	7 75

Champion Metal.—Extra Heavy.

1H 9 50

Cable Sash Chains.

Steel.....List Net Plus 15%

CHALK, CARPENTERS'.

Blue	per gro.	\$1 40
Red	"	1 40
White	"	1 25
Common White School		
Crayon	"	25c

CHIMNEY TOPS.

In bagsper bag \$1 70

CHECKS, DOOR.

Corbin	Net List
Russwin	20%

CHISELS.

Cold.	
Good quality, $\frac{3}{4}$ in., each	\$0 49
" $\frac{1}{2}$ in., "	0 32

Diamond Point.

V. & B. No. 15, $\frac{1}{4}$ in.	0 37
V. & B. No. 15, $\frac{1}{2}$ in.	0 60

FIRMER BEVELLED.

Berg's (Swedish).	
$\frac{1}{2}$ -inch, per doz.	\$4 45
1- " "	7 15
1 1/2- " "	10 15
2- " "	17 15
2 1/2- " "	26 95

Round Nose.

V. & B. No. 65, $\frac{1}{4}$ in.	0 37
V. & B. No. 65, $\frac{1}{2}$ in.	0 49

SOCKET FIRMER.

Berg's (Swedish).	
$\frac{1}{2}$ -inch, per doz.	\$11 95
1- " "	16 75
1 1/2- " "	23 95
2- " "	35 95

Cape.

V. & B. No. 50, $\frac{3}{4}$ in.	0 29
V. & B. No. 50, $\frac{1}{2}$ in.	0 71

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers	List less 35-40%
Yankee, for Yankee Screw Drivers	\$6 00

CHURNS.

Anti-Bent Wood.	
Gal	5 7 10
Each	\$3 00 4 60 4 85
Belle, Barrel	65&7 1/2%

Common Dash.

Gal	5 7
Per doz.	\$17 00 19 00

CLAMPS.

Adjustable.	
Martin's	30%
No. 63, Screw	20%

Cabinet.

Screw20%

Carpenters'.

Steel Bar...List price plus 25%

Carriage Makers'.

2 1/2"	per doz. 7 00
5"	" 14 00
8"	" 28 00
12"	" 46 00

Quilt Frame.

No. 30 Ball and Socket.	
2 1/4" head	per gross \$13 00
No. 50 Ball and Socket.	
3 1/4" head	per gross 14 50

Hose.

Sherman's, brass, $\frac{3}{4}$ ", per doz.	\$0.48
Double, brass, $\frac{3}{4}$ ", per doz.	1 20

Saw Filers.

Wentworth's, No. 1.	\$12.50; No. 2, \$18.25; No. 3, \$16.25.
---------------------	--

CLAWS, TACK.

Wood hdl. No. 10	per doz. \$0 95
Forged steel, wood hdl.	" 1 75
Solid steel	" 2 40
Giant	" 50

CLEANERS.**Drain.**

Iwan's Adjustable	25%
Iwan's Stationary	30%

Fot.

Wireper doz. \$0 75

CLEAVERS.**Family.**

Beatty's, inch.	7 8 9 10
Per doz.	\$27 00 29 00 33 00 36 00

CLEAVISES.

Malleable10c lb.

CLIPPERS.

Bolt\$2 25&6 00

CLIPS.

Axle65&5%

Damper.

Standard	per doz. 70c
Troy	" 38c
Hame	" 50c

COLLARS, STOVE PIPE.**Lacquered.**

Inches	5 6 7
Fancy pattern, per doz.	80c 85c \$1 15

COMPASSES.

Carpenters'15%

COPPER—See Metals**COPPERS—Soldering.****Pointed Roofing.**

3 lb and heavier	per lb. 37c
2 lb.	" 38c
2 1/2 lb.	" 37c
1 1/2 lb.	" 40c
1 lb.	" 43c

CORD.**Picture.**

White Wire60&5%

Sash.

Sampson Spot, No. 7, per doz.	\$24 50
Sampson Spot, No. 7, per doz.	\$29 40

CORKSCREWS

Walker's	30%
Williamson's Regular	35&11%
Williamson's Forged Worm	40%

COTTERS, SPRING

All sizes87 1/2%

COUPLINGS, HOSE.

Brassper doz. \$2 25

CRADLES, GRAIN.

Morgan's Grapevine per doz. \$45 00

CRAYONS—See Chalk.	ELBOWS—Conductor Pipe.	Wood Palls.	HANGERS.
CUTTERS	Galvanized Steel, Tin and Terne, Round Corrugated.	Frazer's, 15 lb. \$1.00; 25 lb. \$1.50 each.	Barn Door.
Glass.	Size. Doz.	Hub Lightning, 15 lb. 90c; 25 lb. \$1.21 each.	U. S. Roller Bearing.....12½%
Woodward .....40%	2-inch .....50%	Tin Cans.	Matchless .....12½%
Meat.	3-inch .....50%	Frazer's	Warehouse Tandem, No. 44 .....33½%
Enterprise—Nos. 5 10 12	4-inch .....50%	1½ lb. per doz.....\$1 75	Conductor P.
Each.... \$2 50 \$4 25 \$3 75	5-inch .....50%	3 lb. per doz..... 3 25	Iwan's Perfection.....45%
" Nos. 22 32	6-inch .....50%	GRINDSTONES.	Eaves Trough.
" 6 50 8 50	ENAMEL, STOVE.	Family.	All sizes, 5" or smaller,
Pipe.	Iron, Black. Per Gross	Inches.. 7 8 10 12	All sizes, larger than
Saunders', No. 1 2 3	Peerless Gloss, ¼ pt.....\$16 20	Per doz. 20 50 21 75 26 25 30 50	5" .....per gross 5 00 "
Each .....\$1 85 2 75 6 75	" " ½ pt..... 21 00	Mounted.	Garage Door.
Slaw and Kraut. Per doz.	" " ½ gal.....\$12 00	Ball Bearing.. 1 2 3	Right Angle .....50&10%
4-knife Kraut.....\$20 00-55 00	" " 1 gal..... 21 00	Each .....\$4 75 5 00 5 25	Sliding Folding .....50%
3-knife Kraut,	Aluminum Per Gross	GUN WADS.	Receding .....50%
8x27 in. 13 00-18 00	Peerless, ¼ pt..... \$42 60	(See Ammunition)	Parlor Door.
1-knife Slaw..... 2 50	" ½ pt..... 61 20	GUNS.	Acme .....per set, \$3 75
2-knife Slaw 3 00	EMERY, TURKISH.	Iver Johnson Champion Single	Ives' Improved.... " 3 40
Washer 11 00	Out of market at present time.	Barrel Shot Guns....Net Prices	Lane's Standard... " 3 50
DAMPERS, STOVE PIPE.	Domestic, lb. ....11½c	Double Barrel, Hammer-	Lane's New Model " 3 10
Diamond.	EYES.	less "	Le Roy Noiseless.....40&10%
All sizes....40% from New List	Bright Wire Screw—See Woods,	HAFES, AWL.	Richards .....25%
DIES AND STOCKS.	B. W.	Brad.	Advance .....40&10%
Discount.....New List	Drifting Pick .....60, 10 & 5%	Common .....per doz. \$0 35	HASPS.
DIGGERS.	Hooks and Eyes—	Patent, plain top.. " 80	Hinge, Wrought...Add 50% to list
Post Hole.	Brass, 1½", No. 60, per	Patent, leather top " 90	With Staples—See Staples.
Eureka.....per doz. \$14 50	gross .....\$3 50	Sewing.	HATCHETS.
Iwan's Split Handle (Eu-	Iron, 1½" No. 50, per gross 1 60	Common " 24	Plumbs, Claw No. 1.....\$1 65
reka)	FASTENERS, STORM SASH.	Patent " 55	Cast Claw, per doz... 1 50@ 1 85
4-ft. Handle...per doz. 15 00	Shroeder's .....per doz. \$1 50	Hammer.	Cast Shingling " 1 50@ 1 85
7-ft. " ..per doz. 20 00	Sensible " 3 00	Common " 24	Germantown .....7½%
Iwan's Perfection (Atlas)	FILES AND RASPS.	Patent " 55	Plumbs, Octagon, Half.....\$2 00
per doz. 16 50	Delta	HAMMERS, HANDLED.	Plumbs, Broad, No. 1..... 1 90
Iwan's Hercules pattern	Delta .....30%	each, net	Plumbs, Lathing No. 1..... 1 50
per doz. 18 00	Swiss .....List plus 25%	Blacksmiths, Hand, No. 0,	HAY KNIVES.
See also Augers—Post Hole.	Utilitiy " net.	26 oz. ....\$1 35	See Knives.
Dividers, Wing .....25%	Nicholson's—	Engineers', No. 1, 26 oz.... 1 35	HAY RACK BRACKETS.
DOOR CHECKS—See Checks	American .....50-7½%	Farriers', No. 7, 7 oz..... 1 41	Wenzelman's No. 1
DOOR HANGERS—See Hangers	Arcade .....50-7½%	Machinists', No. 1, 7 oz.... 1 06	per doz. sets \$18 00
DRILLS.	Black Diamond .....40%	Nail.	Wenzelman's No. 2
Blacksmiths' Twist. (New	Eagle .....50-7½%	Vanadium, No. 41½, 16 oz.,	per doz. sets, 19 20
List) .....40%	Great Western .....50-7½%	each .....\$2 00	Blind.
Breast.	Kearney & Foot.....50-7½%	V. & B., No. 11½, 16 oz.,	Clark's Gravity
Millers Falls No. 12, each \$46 00	McClellan .....50-7½%	each 1 60	No. 1.....per doz. sets, \$2 25
" " " 112, " 26 00	Nicholson brand .....40%	Garden City, No. 11½, 16	No. 3..... " " 5 75
Hand.	J. Barton Smith.....50&7½%	oz., each 1 35	Gate.
Goodell's Automatic.	X-F Swiss Pattern...List+10%	Tinner's Riveting, No. 1, \$	Clark's 1 2 3
Nos. 01 03	Simonds' .....50%	oz., each 1 10	Hgs & Lth, dz. \$5 50 7 00 9 75
Per doz. 12 00 14 40	Disston's .....50%	Shoe, Steel, No. 1, 13 oz.	Hinges only " 4 75 5 50 8 00
Goodell's Single Gear, per	Heller's (American).....50&10%	each 1 00	Latches only, 1 90 1 90
doz. 15 75	Swiss .....5%	Tack	Screen Door.
Goodell-Pratt No. 4½, per	Horse .....75%	Magnetic	1751-3x3 .....doz. \$2 30
doz. list, less..... 30%	FIRE POTS.	No. 5, each..... 1 00	1753-2½x2½ " 2 15
Goodell-Pratt No. 379, per	Clayton & Lambert's—	HAMMERS, HEAVY.	Spring.
doz. list, less..... 30%	each .....\$4 00 @ \$6 00	Farriers' .....20%	Chicago .....Add 12½% to list
Reciprocating.	Gate City .....each, 6 25	Mason'. Single and Double Face.....50%	Columbia Dbl. Acting,
Goodell's.....per doz. 26 00	Gem .....each, \$6 75 @ 8 50	HANDLES.	..... 40&10&5%
DRIVERS, SCREW.	FORKS.	Auger.	Gem .....25%
Standard .....Nets	Manure.	Common Assorted, per doz. \$0 75	Ideal Detachable, per gro. \$11 00
Lock Ferrule "	4-tine .....New prices	Pratt's Adjustable, Nos.	Matchless .....40%
Champion "	GAUGES.	1 & 2, per doz..... 6 00	New Idea .....per gro. \$7 20
Champion Pattern "	Fairmount.....per doz. \$3 75	Ives' Adjustable...per set 1 35	Oxford .....20%
Clark's Interchangeable "	Marking, Mortise, etc.....Nets	Axe .....30%	Wrought Iron.
Edison "	Wire.	Chisel.	Per 100 pairs with screws:
Reed's Lightning "	Disston's .....25%	Hickory, Tanged, Firmer, As-	Light Strap Hinges, No. 3 \$13 20
Goodell's Spiral "	GIMLETS.	sorted, 55c; Large, 85c per	Heavy Strap Hinges, No. 4 16 50
Yankee Ratchet "	Discount .....35@40%	doz.	Light T Hinges.....No. 3 12 60
" Spiral "	GLUE.	Hickory, Socket Firmer, As-	Heavy T Hinges....No. 4 20 60
EAVES TROUGH.	Bulk.	sorted, 70c; Large size, 80c	Extra Heavy T Hinges,
50% off Standard List.	B Amber.....per lb. 35c	per doz.	.....No. 4 22 50
ELBOWS—Stove Pipe.	A White..... " 40c	Coal Pick .....40%	Screw Hook and Strap.
1-piece Corrugated, Uniform	H. S. Amber..... " 32c	Drifting Pick .....40%	6 to 12 in....per 100 lbs. \$7 75
Doz.	Liquid.	File, assorted, 30c; Large, 35c per	14 to 20 in.... " " 7 50
5-inch .....\$2 25	Army & Navy.....40%	doz.	22 to 36 in.... " " 7 25
6-inch 2 30	Le Page's—	Hammer.	Screw Hook and Eye.
7-inch 2 60	List "A".....37½%	Adze Eye ..per doz. 40c to \$1 00	¼ in.....per doz. pair \$2 00
Uniform, Collar Adjustable.	List "B".....33½%	Blacksmiths' " 45c@1 00	½ in..... " " 3 50
Doz.	List "C".....25%	Machinists' " 50c@1 00	¾ in..... " " 5 00
5-inch .....\$2 65	GREASE, AXLE.	Hay and Manure Fork.....25%	HOES.
6-inch 2 70	Wood Boxes.	Screw Driver.	Garden .....Net
7-inch 3 00	Frazer's .....per gro. \$13 00	Assorted 6	HOOKS.
	Hub Lightning 7 50	Large 9	Awning, No. 60....per gro. 50%
		Shovel and Spade.....25%	Belt.
			Brown's .....70&5%
			Jones' .....65&5%
			Bench.
			See Stops, Bench.

PARERS.		Lineman's Side Cutting.		PUNCHES.		SAWS.	
Apple.		Berg's		Conductors.		Band.	
Goodell's	per doz. \$10 80	(Swedish). In. 6 7 8		No. 22	per doz. \$3 00	Disston's 2-in. to 18-in. 10&5%	
Turntable	" 11 40	B.K. Pol. Face.		Machine	per lb. 25	" 3/4-in to 1 1/4-in...20&10%	
White Mountain ..	" 8 40	doz. \$16 70 20 00 23 35		Saddlers'.		Butchers'.	
Reading No. 78 ..	" 11 40	Long Nose Side Cutting.		Common...per doz. 1 50 to 5 00		Disston's No. 2, 14-in....18 20	
Potato.		Berg's (Swedish) In. 5 6		Revolving Spring.		" No. 2, 18-in....19 60	
Goodell's Saratoga, 10 1/2	in., doz. 6 50	Bik. Pol. Face, doz. \$12 25 15 20		Stearns, No. 10...per doz. \$8 00		" No. 2, 22-in....20 85	
Goodell's Saratoga, 5 in.	doz. 5 50	Flat and Round Nose.		" No. 40... " 16 00		" No. 7, 16-in....20 00	
PICKS.		Berg's (Swedish)		" No. 60... " 19 00		" No. 7, 20-in....21 35	
Adze Eye Ore.....	22 1/2%	Flat, In. 4 6 8		PUTTY.		" No. 7, 24-in....23 35	
Drifting and Poll Picks.....	22 1/2%	Bik. Pol. Face.		Strictly pure...per 100 lbs. \$6 00		" No. 7, 28-in....26 00	
Plumbs, Railroad	22 1/2%	Doz. \$8 90 13 35 19 65		RAIL.		Compass.	
Surface	22 1/2%	Berg's (Swedish)		Barn Door.		Disston's No. 20 Jackson... 4 30	
PINCERS.		Round, In. 4 6 8		Matchless, 1-in..... 5c		" No. 40 Sampson 2 60	
Carpenters', cast steel,		Bik. Pol. Face.		Storm King		" No. 277, 10-in... 6 70	
No. ....6 8 10 12		Doz. \$11 15 16 30 23 35		Sliding Door.		" No. 9, 10-in.... 7 70	
Each	\$0 63 .80 1 05 1 15	PLUMBS AND LEVELS.		Bronzed wrought iron,		Cross-Cut.	
Blacksmiths', No. 10	1 07	See Levels.		.....per ft. 8 1/4c		Disston's No. 289, 4-ft.... 3 50	
Heller's	List plus 10%	POINTERS, SPOKE.		RAKES.		" No. 289, 6-ft.... 6 85	
PINS.		Stearns' No. 1....per doz. \$10 00		Per doz.		" No. 289, 8-ft.... 11 85	
Clothes.		" No. 2.... " 12 00		Steel, Bow, 12-in. Teeth \$8 50		Flooring.	
Common, per box of 5 gro. \$0 95		POKERS, STOVE.		Steel, Bow, 14-inch " 9 25		Disston's D19, 16-in.... 27 15	
Picket.		Wr't Steel, str't or bent,		Malleable Iron, 12-in. " 4 75		" D19, 20-in.... 34 35	
Fluter, 15-in....per doz. \$1 10		.....per doz. \$0 75		Malleable Iron, 14-in. " 5 00		Hand and Rip.	
Fluted, 21-in.... " 1 60		Nickel Plated, coil han's " 1 10		Hay.		Disston's No. 7, 30-in.... 38 50	
Spiral	" 1 90	POLISH.		Wood, 10 Teeth.....\$4 00		" No. 7, 32-in.... 42 90	
PIPE.		Metal.		Lawn.		" No. 8, 16-in.... 21 35	
Conductor.		Wizard, 6 -oz.. per gross \$21 00		20 Teeth .....per doz. 5 50		" No. 8, 20-in.... 25 15	
Plain Round and Round Corru-		" 1/2-pt.. " " 24 00		RASPS—See Files.		" No. 8, 24-in.... 29 60	
gated.		" 1/2-gal. " " 12 00		RAZORS—SAFETY.		" No. 8, 28-in.... 35 45	
29 Gauge	50%	" 1-gal. " " 21 00		Gillette .....per doz. \$45 00		" No. 8, 30-in.... 39 90	
28 "	40%	Stove.		Auto Strop		Keystone	
26 "	30%	Black Eagle Paste 5 -oz. \$19 20		"		Keyhole.	
24 "	List	" 1/2-lb. 21 60		Gem 8 40		Disston's No. 5..... 3 65	
Square Corrugated A and B and		Black Eagle Liquid, 6-oz.		Gem (3 doz. lots) .. 8 00		" No. 10..... 4 00	
Octagon.		per gross 16 20		Ever Ready 8 40		" No. 95..... 6 30	
29 Gauge	40%	Black Kid Paste, 5-oz.		Ever Ready (3 doz. lots) " 8 00		Miter Box.	
28 "	35%	per case 19 20		RAZOR STROPS		Disston's No. 4, 4x20-in... 36 15	
26 "	25%	Black Kid Paste, 1/2-lb.. 21 60		Star (Honing) .....50%		" No. 4, 5x22-in... 43 25	
24 "	List	Black Jack Liquid, 1/2-pt.		REGISTERS.		" No. 4, 6x22-in... 47 20	
Galvanized Toncan Metal, Genu-		per gross 16 20		Cast Iron		Patternmakers'.	
ine O. H. Iron, Lyonore Metal,		Black Kid Liquid, 1/2-pt.. 24 00		Steel and Semi-Steel.....List		Disston's 7 1/2-in.... 12 05	
Charcoal Iron and Keystone		Black Jack Paste, No. 10		Solid Brass or Bronze Metal.....10%		Pruning.	
C. B.		per gross 16 20		Adjustable Ceiling Ventilators 10%		Disston's No. 20..... 20 80	
Plain Round and Round Corru-		POWDER.		REGISTER FACES.		Stairbuilders'.	
gated.		See Ammunition.		Japanned, Bronzed and Plated.		Disston's 6-in. 7 90	
29 Gauge	40%	PRESSES, FRUIT AND JELLY.		4x6 to 14x14.....10%		Wood.	
28 "	35%	Enterprise Manufacturing Co. 25%		14x14 to 38x42.....25%		Disston's No. 111, 30-in... 22 20	
26 "	25%	PRIMERS.		REVOLVERS.		" No. 111, 32-in... 22 75	
24 "	List	See Ammunition.		Iver Johnson Safety Automatic		" No. 47, 30-in... 20 25	
Square Corrugated A and B Poly-		PRUNERS.		Hammer		" No. 47, 32-in... 20 80	
gon and Octagon.		Disston's Pole....per doz. \$18 00		Hammerless		SAW FRAMES.	
29 Gauge	35%	Water's Improved...per doz. 60%		I. J. Model 1900..... " "		Common, plain....per doz. \$1 50	
26 "	25%	PULLERS.		RINGS AND RINGERS.		Common, painted... " 2 10	
24 "	List	Cork.		Ball.		SCISSORS.	
14 and 16-oz. Copper, all de-		Daisy .....each \$3 10		Copper .....2 1/2-in. 3-in.		Star	
signs	List	Phoenix		Per doz. ....\$2 40 \$2 65		SCOOPS	
Portico Elbows.		Quick and Easy..... " 2 70		Rea's Improved Self-		Hubbard Western Pattern Riveted.	
Galvanized and Terne Steel.		Nail.		Piercing copper,		Size.. A B C D	
1 -inch	35%	Giant .....per doz. \$14 50		Steel, per doz..... 1 50 1 80		1 ..\$16 75 16 00 15 25 14 45	
1 1/4-inch	35%	Never-Slip		Hog.		4 .. 17 85 17 10 16 35 15 60	
1 1/2-inch	35%	Awning—Jap'd		Blair's Rings....per doz. \$ 75		6 .. 18 65 17 85 17 10 16 35	
2 -inch	25%	Clothes Line		Blair's Ringers.. " 1 00		SCRAPERS.	
Discounts on Round apply on		Hay Fork.		Brown's Ringers.. " 1 00		Triangular, No. 6 per doz. \$6 25	
sizes 2-inch to 6-inch, inclusive.		Iron Wheel, 5-in...per doz. \$2 50		Hill's Ringers... " 1 00		Road.	
Freight allowed on 15 dozen or		Wood Wheel, 6-in. " 2 65		Hill's Ring, boxes " 72		Cubic ft. 7 5 3	
more, to all points where		Wood Wheel, 6-in.,		Major Rings.... " 60		With runners, ea. \$7 00 6 50 6 20	
freight rate does not exceed		pass knot		Perfect Rings.... " 1 50		SCREEN DOOR HINGES.	
\$1.00 per 100 lbs. Less than		Sash.		Wolverine Rings " 1 65		Cast iron .....gross \$13 00	
15 dozen F. O. B. Factory.		Common		Wolverine Ringers " 1 10		Steel	
Terms 30 days net, 2% ten days.		Common-Sense, 2-in. ....Net		Fruit Jar.		SCREWS.	
Standard Gauge Conductor Pipe,		Empire Pattern, 2-in. ....Net		White .....per lb. 30		Bench.	
plain or corrugated.		Ideal		Key.		Iron, ins. 1 1 1/2 1 1/2	
Not Nested	35-5%	Steel		Split, round .....per doz. \$0 17		\$6 82 \$7 87 9 45 16 80	
Nested solid	40%	PULLEYS.		Split, square..... " 32		Wood, white maple, per doz. 6 00	
Stove		Awning—Jap'd		Ball, round		Hand—Wood	
29 Gauge, 3-inch.....	per 100 Joints \$19 00	Clothes Line		RIVETS.		Hand Rail	
" 4-inch.....	19 50	Hay Fork.		Copper Belt Add 15% to list		Jack	
" 5-inch.....	20 25	Iron Wheel, 5-in...per doz. \$2 50		Coppered Iron		Lag or Coach—all sizes, gimlet	
" 6-inch.....	21 00	Wood Wheel, 6-in. " 2 65		Tinners'		pointed	
" 7-inch.....	23 00	Wood Wheel, 6-in.,		Home		45-50%	
T-Joint Made up.		pass knot		Slotted Clinch...per doz. 60@1 10		Saw—Centennial.	
6-inch	per 100 \$60 00	Steel		Tubular.		Nos. 1 2 3 4	
Furnace Pipe.		See Metals in Column 1.		Nos. 1 and 2 assorted sizes,		Per doz.....47c 55c 75c 90c	
Double Wall Pipe and Fit-		PLANES.		50 in box .....doz. 75c		Wood.	
tings	15%	Stanley Iron Bench.....Net		Nos. 1 and 2 assorted sizes,		F. H. Bright.....67 1/2-20%	
Single Wall Pipe, Round		PLATE, TIN.		10 in box .....doz. 1 40		F. H. Blued.....65-20%	
Pipe Fittings	15%	See Metals in Column 1.		RIVET SETS.		F. H. Jap'd.....65-20%	
Galvanized and Black Iron		PUMP.		See Sets.		F. H. Brass.....57 1/2-20%	
Pipe, Shoes, etc.....	10%	Spray.		ROPE.		R. H. Brass.....35 1/2-20%	
PLIERS.		Midget Junior....per doz. \$3 75		Cotton.		SCYTHES.	
V. & B. No. 6	each 0 64	New Misty		1/4, 5-16 in. Com. on reels,		Clipper, Grass ...per doz. \$13 50	
" No. 7 Gas	0 67	Crescent		per lb. ....85c		Honest Dutchman... " 13 00	
" Double Duty 106.....	0 63	PUMPS.		1/4, 5-16 in. Com. in colls.,			
" Nut, No. 3.....	0 70			per lb. ....85c			

SETS.		SPRINKLERS, LAWN.		TAPES, MEASURING.		WARE.	
Nail.		Stearns' No. 1....per doz.	\$11 50	Asses' Skin.....List&40%		Glue Pots.	
Square head.....per doz.	1 84					Tinned.....Add 15% to list	
Cup point, knurled "	1 78					Enameled.....30%	
Rivet.		SQUARES.		THERMOMETERS.		WASH BOARDS—See Boards.	
Farmers'.....per doz.	2 50	Steel and Iron.....Nets new list		Tin Case.....per doz.	80c@1 25		
Tinners' 3-4.....5 75		(Add for bluing, \$3.00 per doz. net)		Wood Back... "	\$2 00@ 12 00		
00-0.....8 75		Mitre.....		Glass..... "	12 00		
Saw.		Try.....		TIES.			
Aiken's Pattern...per doz.	\$6 50	Try and Bevel.....		Bale.			
Disston's Monarch.....	7 20	Try and Miter.....		Single Loop, carload			
Disston's X-cut.....	13 50			lots.....75&7%			
Leach's.....	80			Single Loop, less than			
Nash's Hand.....	3 15	Fox's.....per doz.	\$6 00	car lots.....70&15			
Nash's X-cut.....	4 20	Winterbottom's.....	10%	Cow—See "Chains."			
Stillman's Lever.....	1 30	SQUEEZERS, LEMON.					
Stillman's X-cut.....	2 50	Common Wood.....per doz.	\$0 70				
Whiting Pattern,		Porcelain Lined, Wood	1 25				
No. 21.....	7 50	30ss, malleable iron	1 20				
Eccentric Anvil,		iron frame, porc'n					
Hand No. 395,		bowl.....	1 90				
N. P. Morrill Pat-		iron frame, glass	2 35				
tern.....	14 50	Little Giant, tin'd					
SHARPENERS, SKATE.		iron.....	4 00				
Diamond.....per doz.	\$1 60	Drum, japanned.....	3 60				
Perfect.....	1 20	Drum, nickel plated	4 50				
SHEARS.		STAPLES.					
Nickel Plated, Straight,	6" \$12 90	Blind.					
" " " " 7" 14 85		Barbed.....per lb.	21@22c				
" " " " 8" 16 30		Butter, Tub.....	16@19c				
Japanned, Straight.....	6" 11 00	Fence—					
" " " " 7" 12 40		Polished.....per 100 lbs.	\$5 45				
" " " " 8" 13 80		Galvanized.....	6 15				
Tinners'—See Snips.		Netting.					
SHEAVES, SLIDING DOOR.		Galvanized.....per 100 lbs.	6 50				
Common.		Wrought.					
Inches.....3 4 5		Wrought Staples, Hasps and					
Per set.....\$1 40 1 75 2 40		Staples, Hasps, Hooks and					
Hatfield's.		Staples, and Hooks and					
Per set \$1 80 2 10 2 75 25		Staples.....50&10%					
SHELLS—See Ammunition.		Extra heavy.....35%					
SHELLERS, CORN		STEELYARD.					
Union.....per doz.	\$6 75	Discount 25%.					
SHIELDS.		STONES.					
Expansion Bolt Shields.....	60%	Axe.					
Shoes.		Hindustan.....per lb.	New Nets				
Conductor.....	60%	More Grit.....	" "				
SHOT—See Ammunition.		Washita.....	" "				
SHOVELS AND SPADES.		Emery.					
Coal.		No. 126.....per doz.	New Nets				
Hubbard's		Oil—Mounted.					
No. A B C D		Arkansas Hard					
1. \$16 00 15 10 14 45 13 70		No. 7.....per doz.	New Nets				
2. 16 25 15 60 14 85 14 10		Arkansas Soft.....	" "				
3. 16 75 16 00 16 25 14 45		Washita No.	" "				
4. 17 10 16 35 16 60 14 85		717.....	" "				
Post Drain & Ditching.		Oil—Unmounted.					
Hubbard's		Arkansas Hard, per lb.	New Nets				
Size A B C		Arkansas Soft.....	" "				
14" \$17 15 16 40 15 65		Lily White.....	" "				
16" 17 50 16 75 16 00		Queer Creek.....	" "				
18" 17 85 17 10 16 35		Washita.....	" "				
20" 18 20 17 45 16 70							
22" 18 55 17 80 17 05		Scythe.					
Snow.		Black Diamond per gro.	New Nets				
Hubbard Special,		Crescent.....	" "				
Long Handle.....\$10 00		Green Mountain.....	" "				
D—Handle.....11 00		LaMoille.....	" "				
Sidewalk Scraper.....6 50		Extra Quinne-	" "				
Alaska Steel		bog.....	" "				
D—Handle.....per doz.	\$3 50	Red End.....	" "				
Long Handle.....	3 00						
SINKS.		STOPS, BENCH.					
Cast Iron.		No. 10 Morrill pat-	tern.....per doz.	\$11 00			
Painted, 16x24.....Net		No. 11 Stearns pat-	tern.....	10 00			
Enameled, White, 16x24.....		No. 15 Smith pattern	.....	7 00			
Wrought Steel.		STOPPERS, FLUE.					
Painted, 16x24.....		Common.....per doz.	\$1 10				
SLEDGES—See Hammers.		Gem, flat, No. 3.....	1 00				
		Gem, No. 1.....	1 10				
SNAPS, HARNESS.		STOVE PIPE—See pipe.					
Covered Spring.....Add 30%		STOVE BOARDS—See Boards.					
Judd's Pattern Add 33 1-6% to list		STOVE POLISH—See Polish.					
SNATHS.		STRAPS.					
Double Ring, Bush.....per doz.	\$9 75	Skate.....per doz.	85c&1 20				
Patent Loop, Bush.....	10 00	STRETCHERS.					
Patent Loop, Grass.....	8 75	Carpet.					
SNIPS, TINNERS'.		Bullard's.....per doz.	\$3 90				
Clover Leaf.....40&10%		Excelsior.....	5 25				
National.....40&10%		Malleable Iron.....	70				
Star.....50%		Perfection.....	6 30				
SOLDER—See Metals.		King.....	4 50				
SPRINGS, DOOR		Wire.					
Perfect.		O. S. Elwood, No. 1 per doz.	Nets				
Nos. 2 3 4 5 6 7		O. S. Elwood, No. 2	" "				
Per doz. 55c 60c 65c 75c 90c 1 00		SWIVELS					
Reliance.		Malleable Iron.....per lb.	\$0 10				
Light Medium Heavy		Wrought Steel.....per gro.	4 50				
Per doz. \$1 55 2 10 3 20		TACKS.					
Torrey's.....per doz.	1 65	Bill Posters' 6-oz., 25 lb. boxes.					
		per lb.....	15c				
		Upholsterers' 6-oz., 25-lb.	boxes, per lb.....15½c				

ADVERTISERS' INDEX

ALPHABETICAL LIST

American Furnace Co.	20
American Sheet & Tin Plate Co.	94
American Steel & Wire Co.	10
Auto-Wheel Coaster Co., Inc.	11
Bemis & Call Hdw. & Tool Co.	10
Berger Bros. Co.	96
Bertsch & Co.	96
Black Silk Stove Polish Works.	29
Brier Hill Steel Co.	94
Bullard & Gormley Co.	99
Central Stove & Furnace Repair Co.	29
Chatsworth Mfg. Co.	9
Clark-Smith Hdw. Co.	96
Clayton & Lambert Mfg. Co.	97
Cleveland & Buffalo Transit Co.	29
Cleveland Castings Pattern Co.	29
Coes Wrench Co.	10
Coleman, Allan J.	11
Co-operative Foundry Co.	14
Corbin Screw Corporation.	7
Cortright Metal Rodding Co.	95
Curfman Mfg. Co., F. L.	91
Danville Stove & Mfg. Co.	16
Dieckmann Co., Ferdinand.	92
Diener Mfg. Co., G. W.	97
Disston & Sons, Inc., Henry.	4
Double Blast Mfg. Co.	97
Dreis & Krump Mfg. Co.	96
Enterprise Mfg. Co. of Pa.	5
Fanner Mfg. Co.	29
Farris Furnace Co.	21
Forest City Fdy. & Mfg. Co.	17
Friedley-Voshardt Co.	95
Geroch Bros Mfg. Co.	94
Hall-Neal Furnace Co.	22
Hammond Heating Co.	21
Harrington & King Perforating Co.	95
Hart & Cooley Co.	23
Haynes-Langenberg Mfg. Co.	27
Hemp & Co.	96
Henry Furnace & Fdy. Co.	13
Hess-Snyder Co.	21
Howes Co., The S. M.	27
Hussey & Co., C. G.	95
Independent Register & Mfg. Co.	23
Inland Steel Co.	93
International Radiator Co.	91
Johnson's Arms & Cycle Works	10
Kimball Bros. Co.	91
Kirk-Latty Mfg. Co.	29
Knoedler, Frederick J.	96
Lalanc & Grosjean Mfg. Co.	11
Lamneck Co., The W. E.	18
Lennox Furnace Co.	15
Lovell Mfg. Co.	9
Lufkin Rule Co.	11
Magee Furnace Co., Inc.	19
Mahoning Fdy. Co.	12
Manny Heating Supply Co.	21
Marsh Lumber Co.	22
Meyer Bro. Co., F.	25
Meyer Furnace Co.	30
Meyers Mfg. Co., Fred J.	91
Michigan Safety Furnace Pipe Co.	26
Milwaukee Corrugating Co.	100
Modern Way Furnace Co.	20
Monroe Fdy. & Furnace Co.	22
Nat'l Stove Repair Co.	29
Niagara Machine & Tool Works.	96
Nicholson File Co.	7
Nickel Plate Stove Polish Co.	29
North Bros. Mfg. Co.	9
Northwestern Stove Repair Co.	29
Oliver Iron & Steel Co.	8
Peck, H. E.	91
Penn. & Atlantic Seaboard Hdw. Assn.	6
Pittsburgh Steel Co.	8
Premier Warm Air Heater Co.	1
Quick Meal Stove Co.	2-97
Quincy Pattern Co.	29
Richards-Wilcox Mfg. Co.	8
Rock Island Mfg. Co.	9
Rock Island Register Co.	23
Ross-Gould	91
Ryerson & Son, Joseph T.	94
Safety Interlocking Stove Pipe Co.	27
St. Louis Technical Institute.	91
Scheible-Moncrief Heater Co.	20
Schwab & Sons Co. R. J.	22
Special Chemicals Co.	2
Standard Ventilator Co.	97
Stanley Rule & Level Plant.	7
Stearns Register Co.	24
Sullivan-Geiger Co.	91
Towner, F. A.	91
Thomas & Armstrong Co.	95
Vaughan & Bushnell Mfg. Co.	3
Vedder Pattern Works.	29
Waterloo Register Co.	26
Whitney Mfg. Co., W. A.	96
Wise Furnace Co.	19

CLASSIFIED INDEX

Accessories—Automobiles.	
Curfman Mfg. Co., F. L.	Maryville, Mo.
International Radiator Co.,	
Chicago, Ill.	
Richards-Wilcox Mfg. Co.,	
Aurora, Ill.	
Asbestos Sheets.	
Manny Heating Supply Co.,	Chicago, Ill.
Auto Radiators	
International Radiator Co.,	Chicago, Ill.
Bail Ties.	
American Steel & Wire Co.,	Chicago, Ill.
Pittsburgh Steel Co.,	Pittsburgh, Pa.
Bicycles.	
Johnson's Arms & Cycle Works,	Fitchburg, Mass.
Iver,	
Bolts and Nuts.	
Corbin Screw Corporation,	New Britain, Conn.
Oliver Iron & Steel Co.,	Pittsburgh, Pa.
Ryerson & Son, Jos. T.,	Chicago, Ill.
Bolts—Stove	
Kirk-Latty Mfg. Co.,	Cleveland, Ohio
Brakes—Bicycles.	
Corbin Screw Corporation,	New Britain, Conn.
Brakes—Cornice.	
Bertsch & Co.,	Cambridge City, Ind.
Dreis & Krump Mfg. Co.,	Chicago, Ill.
Niagara Machine & Tool Wks.,	Buffalo, N. Y.
Brass and Copper.	
Hussey & Co., C. G.,	Pittsburgh, Pa.
Builders Hardware.	
Bullard & Gormley, Chicago, Ill.	
Castings—Malleable	
Fanner Mfg. Co.,	Cleveland, Ohio
Ceilings—Metal.	
Friedley-Voshardt Co.,	Chicago, Ill.
Milwaukee Corrugating Co.,	Milwaukee, Wis.
Chain—Furnace.	
Corbin Screw Corporation,	New Britain, Conn.
Chaplets	
Fanner Mfg. Co.,	Cleveland, Ohio
Chisels.	
Vaughan & Bushnell Mfg. Co.,	Chicago, Ill.
Cleanders—Hand.	
Nickel Plate Stove Polish Co.,	Chicago, Ill.
Clips—Damper.	
Waterloo Register Co.,	Waterloo, Iowa
Closet Cleaners.	
Coleman, Allan J.,	Chicago, Ill.
Coasters.	
The Auto-Wheel Coaster Co., Inc.,	No. Tonawanda, N. Y.
Cores—Radiator.	
Curfman Mfg. Co., F. L.	Maryville, Mo.
International Radiator Co.,	Chicago, Ill.
Cornices.	
Friedley-Voshardt Co.,	Chicago, Ill.
Cribs and Bins.	
Thomas & Armstrong Mfg. Co.,	London, Ohio
Cups—Suction.	
Coleman, Allan J.,	Chicago, Ill.
Cut-Offs—Rain Water.	
Sullivan-Geiger Co.,	Indianapolis, Ind.
Dampers—Hot Air.	
Howes Co., The S. M.,	Boston, Mass.

Eaves Trough.	
Berger Bros. Co., Philadelphia, Pa.	
Clark-Smith Hardware Co.,	Peoria, Ill.
Milwaukee Corrugating Co.,	Milwaukee, Wis.
Elbows and Shoes—Conductor	
Dieckmann Co., Ferdinand,	Cincinnati, Ohio
Elevators.	
Kimball Bros. Co.,	Council Bluffs, Iowa
Enamel—Iron.	
Black Silk Stove Polish Works,	Sterling, Ill.
Nickel Plate Stove Polish Co.,	Chicago, Ill.
Enamelware	
Lalanc & Grosjean Mfg. Co.,	Chicago, Ill.
Fence Gates.	
American Steel & Wire Co.,	Chicago, Ill.
Pittsburgh Steel Co.,	Pittsburgh, Pa.
Fencing Wire.	
Pittsburgh Steel Co.,	Pittsburgh, Pa.
Fenders.	
Meyers Mfg. Co., Fred J.,	Hamilton, Ohio
Files.	
Disston & Sons, Inc., Henry,	Philadelphia, Pa.
Nicholson File Co.,	Providence, Rhode Island
Freezers—Ice Cream.	
North Bros. Mfg. Co.,	Philadelphia, Pa.
Furnace Rings.	
Independent Reg. & Mfg. Co.,	Cleveland, Ohio
Furnaces—Soldering.	
Clayton & Lambert Mfg. Co.,	Detroit, Mich.
Diener Mfg. Co., G. W.,	Chicago, Ill.
Double Blast Mfg. Co.,	North Chicago, Ill.
Quick Meal Stove Co.,	St. Louis, Mo.
Grindstones.	
Richards-Wilcox Mfg. Co.,	Aurora, Ill.
Guards—Fire.	
Meyers Mfg. Co., Fred J.,	Hamilton, Ohio
Hammers.	
Stanley Rule & Level Plant,	New Britain, Conn.
Vaughan & Bushnell Mfg. Co.,	Chicago, Ill.
Handles—Boiler.	
Berger Bros. Co.,	Philadelphia, Pa.
Hangers—Door	
Richards-Wilcox Mfg. Co.,	Aurora, Ill.
Heaters—School Room.	
Hammond Heating Co.,	Cincinnati, Ohio
Haynes-Langenberg Mfg. Co.,	St. Louis, Mo.
Meyer Furnace Co.,	Peoria, Ill.
Monroe Fdy. & Furnace Co.,	Monroe, Mich.
Heaters—Warm Air.	
American Furnace Co.,	St. Louis, Mo.
Co-operative Fdy. Co.,	Rochester, N. Y.
Danville Stove & Mfg. Co.,	Danville, Pa.
Farris Furnace Co.,	Springfield, Mass.
Forest City Fdy. & Mfg. Co.,	Cleveland, Ohio
Haynes-Langenberg Mfg. Co.,	St. Louis, Mo.
Hall-Neal Furnace Co.,	Indianapolis, Ind.
Hammond Heating Co.,	Cincinnati, Ohio
Henry Furnace & Fdy. Co.,	Cleveland, Ohio
Hess-Snyder Co.,	Massillon, Ohio
Lennox Furnace Co.,	Marshalltown, Iowa
Magee Furnace Co.,	Boston, Mass.
Mahoning Fdy. Co.,	Youngstown, Ohio

Heaters—Warm Air—Continued.	
Manny Heating Supply Co.,	Chicago, Ill.
Meyer Furnace Co.,	Peoria, Ill.
Modern Way Furnace Co.,	Fort Wayne, Ind.
Monroe Fdy. & Furnace Co.,	Monroe, Mich.
Premier Warm Air Heater Co.,	Dowagiac, Mich.
Scheible-Moncrief Heater Co.,	Cleveland, Ohio
Schwab & Sons Co., R. J.,	Milwaukee Wis
Waterloo Register Co.,	Waterloo, Iowa
Wise Furnace Co.,	Akron, Ohio
Holders—Flag Pole	
Enterprise Mfg. Co. of Pa.,	Philadelphia, Pa.
Horse Shoes.	
American Steel & Wire Co.,	Chicago, Ill.
Indoor Closet.	
Independent Reg. & Mfg. Co.,	Cleveland, Ohio
Jobbers—Hardware.	
Bullard & Gormley Co.,	Chicago, Ill.
Clark-Smith Hardware Co.,	Peoria, Ill.
Kitchen Utensils	
Lalanc & Grosjean Mfg. Co.,	Chicago, Ill.
Machines—Crimping.	
Bertsch & Co.,	Cambridge City, Ind.
Niagara Machine & Tool Works,	Buffalo, N. Y.
Machines—Razor Blades	
Hyfield Mfg. Co.,	New York
Machines—Stove Pipe.	
Hemp & Co.,	St. Louis, Mo.
Machines—Tinsmiths'.	
Bertsch & Co.,	Cambridge City, Ind.
Dreis & Krump Mfg. Co.,	Chicago, Ill.
Hemp & Co.,	St. Louis, Mo.
Knoedler, Frederick J.,	Philadelphia, Pa.
Niagara Machine & Tool Works,	Buffalo, N. Y.
Whitney Mfg. Co., W. A.,	Rockford, Ill.
Mailing Lists.	
Ross-Gould,	St. Louis, Mo.
Meat Smokers	
Chatsworth Mfg. Co.,	Chatsworth, Ill.
Meat and Food Choppers	
Enterprise Mfg. Co. of Pa.,	Philadelphia, Pa.
Metals—Perforated.	
Harrington & King Perforating Co.,	Chicago, Ill.
Miters.	
Friedley-Voshardt Co.,	Chicago, Ill.
Motocycles.	
Johnson's Arms & Cycle Works,	Fitchburg, Mass.
Nails—Slatting.	
Hussey & Co., C. G.,	Pittsburgh, Pa.
Nails—Wire.	
American Steel & Wire Co.,	Chicago, Ill.
Pittsburgh Steel Co.,	Pittsburgh, Pa.
Nut Crackers	
Enterprise Mfg. Co. of Pa.,	Philadelphia, Pa.
Ornaments—Sheet Metal.	
Friedley-Voshardt Co.,	Chicago, Ill.
Geroch Bros. Mfg. Co.,	St. Louis, Mo.
Parts—Auto.	
International Radiator Co.,	Chicago, Ill.
Parts—Bicycles	
Corbin Screw Corp.,	New Britain, Conn.

Parts—Tools.

Corbin Screw Corp.,
New Britain, Conn

Patterns—Furnace.

Central Pattern Co., Quincy, Ill.

Patterns—Machinery.

Central Pattern Co., Quincy, Ill.

Patterns—Stove.

Central Pattern Co., Quincy, Ill.
Cleveland Castings Pattern Co.,
Cleveland, Ohio
Quincy Pattern Co., Quincy, Ill.
Vedder Pattern Wks., Troy, N. Y.

Pipe—Conductor.

Berger Bros. Co., Philadelphia, Pa.
Clark-Smith Hdw. Co., Peoria, Ill.
Dieckmann Co., Ferdinand,
Cincinnati, Ohio
Friedley-Voshardt Co., Chicago, Ill.
Hussey & Co., C. G., Pittsburgh, Pa.
Milwaukee Corrugating Co.,
Milwaukee, Wis.

Pipe and Fittings—Furnace.

Henry-Miller Foundry Co.,
Cleveland, Ohio
Lamneck Co., The W. E.,
Columbus, Ohio
Meyer & Bro. Co., F., Peoria, Ill.
Manny Heating Supply Co.,
Chicago, Ill.
Michigan Safety Furnace Pipe
Co., Detroit, Mich.
Safety Interlocking Stove Pipe
Co., Mt. Pleasant, Iowa
Stearns Register Co.,
Detroit, Mich.

Pipe and Fittings—Stove.

Hemp & Co., St. Louis, Mo.
Meyer & Bro. Co., F., Peoria, Ill.
Michigan Safety Furnace Pipe
Co., Detroit, Mich.
Safety Interlocking Stove Pipe
Co., Mt. Pleasant, Iowa
Sullivan-Geiger Co.,
Indianapolis, Ind.

Plumbs and Levels.

Stanley Rule & Level Plant,
New Britain, Conn.

Polish—Metal.

Black Silk Stove Polish Co.,
Sterling, Ill.
Nickel Plate Stove Polish Co.,
Chicago, Ill.

Polish—Stoves.

Black Silk Stove Polish Co.,
Sterling, Ill.
Nickel Plate Stove Polish Co.,
Chicago, Ill.

Posts—Steel Fence.

American Steel & Wire Co.,
Chicago, Ill.

Presses—Lard

Enterprise Mfg. Co. of Pa.,
Philadelphia, Pa.

Punches.

Bertsch & Co., Cambridge City, Ind.
Niagara Machine & Tool Works,
Buffalo, N. Y.
Whitney Mfg. Co., W. A.,
Rockford, Ill.

Rasps.

Disston & Sons, Inc., Henry,
Philadelphia, Pa.
Nicholson File Co.,
Providence, Rhode Island

Ranges—Combination Gas and Coal.

Quick Meal Stove Co.,
St. Louis, Mo.

Registers—Warm Air.

Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co.,
Cleveland, Ohio
Independent Reg. & Mfg. Co.,
Cleveland, Ohio
Manny Heating Supply Co.,
Chicago, Ill.
Marsh Lumber Co., Dover, Ohio
Rock Island Register Co.,
Rock Island, Ill.
Stearns Register Co.,
Detroit, Mich.
Waterloo Register Co.,
Waterloo, Iowa

Register Shields.

Hall-Neal Furnace Co.,
Indianapolis, Ind.

Repairs—Furnace.

Central Stove & Furnace Repair
Co., Chicago, Ill.
Nat'l Stove Repair Co.,
Miamisburg, Ohio
Northwestern Stove Repair Co.,
Chicago, Ill.

Repairs—Stove.

Central Stove & Furnace Repair
Co., Chicago, Ill.
Nat'l Stove Repair Co.,
Miamisburg, Ohio
Northwestern Stove Repair Co.,
Chicago, Ill.

Revolvers.

Johnson's Arms & Cycle Works,
Fitchburg, Mass.

Rivets.

Oliver Iron & Steel Co.,
Pittsburgh, Pa.

Rivets—Stove

Kirk-Latty Mfg. Co.,
Cleveland, Ohio

Roasters

Lalace & Grosjean Mfg. Co.,
Chicago, Ill.

Rods—Stove

Kirk-Latty Mfg. Co.,
Cleveland, Ohio

Rolls—Forming.

Bertsch & Co., Cambridge City, Ind.
Niagara Machine & Tools Works,
Buffalo, N. Y.

Roofing—Iron and Steel.

American Sheet & Tin Plate Co.,
Pittsburgh, Pa.
Brier Hill Steel Co.,
Youngstown, Ohio
Cortright Metal Roofing Co.,
Philadelphia, Pa.
Friedley-Voshardt Co.,
Chicago, Ill.
Inland Steel Co.,
Chicago, Ill.
Milwaukee Corrugating Co.,
Milwaukee, Wis.

Rubbish Burners.

Hart & Cooley Co.,
New Britain, Conn.

Rules.

Lufkin Rule Co., Saginaw, Mich.

Sanitary Specialties.

Coleman, Allan J., Chicago, Ill.

Saws.

Disston & Sons, Inc., Henry,
Philadelphia, Pa.

Schools—Sheet Metal Pattern Drafting.

St. Louis Technical Institute,
St. Louis, Mo.

Screens—Perforated Metal.

Harrington & King Perforating
Co., Chicago, Ill.

Screw Drivers.

North Bros. Mfg. Co.,
Philadelphia, Pa.

Sheets—Black and Galvanized.

American Sheet & Tin Plate Co.,
Pittsburgh, Pa.
Brier Hill Steel Co.,
Youngstown, Ohio
Inland Steel Co.,
Chicago, Ill.
Kniedler, Frederick J.,
Philadelphia, Pa.

Sheets—Blue Annealed.

Brier Hill Steel Co.,
Youngstown, Ohio

Shotguns

Johnson's Arms & Cycle Works,
Fitchburg, Mass.

Sifters—Ash.

Diener Mfg. Co., G. W.,
Chicago, Ill.

Sifters—Flour.

Meyers Mfg. Co., Fred J.,
Hamilton, Ohio

Sleds.

The Auto-Wheel Coaster Co., Inc.,
No. Tonawanda, N. Y.

Smoke Pipe.

Manny Heating Supply Co.,
Chicago, Ill.

Soldering Fluid.

Towner, F. A., Muskegon, Mich.

Soldering Fluxes.

Special Chemicals Co.,
Highland Park, Ill.

Soldering Furnaces.

Clayton & Lambert Mfg. Co.,
Detroit, Mich.
Diener Mfg. Co., G. W.,
Chicago, Ill.
Double Blast Mfg. Co.,
North Chicago, Ill.
Quick Meal Stove Co.,
St. Louis, Mo.

Soldering Paste.

Towner, F. A., Muskegon, Mich.
Special Chemicals Co.,
Highland Park, Ill.

Solid—Sal Ammoniac

Special Chemicals Co.,
Highland Park, Ill.

Specialties—Hardware.

Bemis & Call Hdw. & Tool Co.,
Springfield, Mass.
Bullard & Gormley, Chicago, Ill.
Chatsworth Mfg. Co.,
Chatsworth, Ill.
Corbin Screw Corporation,
New Britain, Conn.
Diener Mfg. Co., G. W.,
Chicago, Ill.
Disston & Sons, Inc., Henry,
Philadelphia, Pa.
Enterprise Mfg. Co. of Pa.,
Philadelphia, Pa.
Lufkin Rule Co., Saginaw, Mich.
Nicholson File Co.,
Providence, Rhode Island
North Bros. Mfg. Co.,
Philadelphia, Pa.
Richards-Wilcox Mfg. Co.,
Aurora, Ill.
Rock Island Mfg. Co.,
Rock Island, Ill.
Stanley Rule & Level Plant,
New Britain, Conn.
Vaughan & Bushnell Mfg. Co.,
Chicago, Ill.

Specialties—Tin and Sheet Metal.

Curfman Mfg. Co., F. L.,
Maryville, Mo.

Speedometers—Bicycle.

Corbin Screw Corporation,
New Britain, Conn.

Sporting Goods.

Bullard & Gormley, Chicago, Ill.

Stars—Hard Iron Cleaning.

Fanner Mfg. Co.,
Cleveland, Ohio

Statuary.

Friedley-Voshardt Co.,
Chicago, Ill.
Gerock Bros. Mfg. Co.,
St. Louis, Mo.

Steel Sheets.

Ryerson & Son, Jos. T.,
Chicago, Ill.

Stock Tanks

Thomas & Armstrong Mfg. Co.,
London, Ohio

Stock Waterers.

Rock Island Mfg. Co.,
Rock Island, Ill.

Stoves—Camp.

Quick Meal Stove Co.,
St. Louis, Mo.

Stoves—Oil and Gasoline.

Quick Meal Stove Co.,
St. Louis, Mo.

Stoves and Ranges.

Co-operative Fdy. Co.,
Rochester, N. Y.
Danville Stove & Mfg. Co.,
Danville, Pa.
Quick Meal Stove Co.,
St. Louis, Mo.

Stove Pipe Reducer.

Sullivan Gieger Co.,
Indianapolis, Ind.

Stuffers—Sausage

Enterprise Mfg. of Pa.,
Philadelphia, Pa.

Tacks, Staples, Spikes.

American Steel & Wire Co.,
Chicago-New York

Tapes.

Lufkin Rule Co., Saginaw, Mich.

Tiles and Shingles—Metal.

Cortright Metal Roofing Co.,
Philadelphia, Pa.
Milwaukee Corrugating Co.,
Milwaukee, Wis.
Thomas & Armstrong Mfg. Co.,
London, Ohio

Tin—Perforated.

Harrington & King Perforating
Co., Chicago, Ill.

Tinplate.

American Sheet & Tin Plate Co.,
Pittsburgh, Pa.
Kniedler, Frederick J.,
Philadelphia, Pa.

Tools—Auto Repair.

Curfman Mfg. Co., F. L.,
Maryville, Mo.
International Radiator Co.,
Chicago, Ill.

Tools—Carpenters'

Disston & Sons, Inc., Henry,
Philadelphia, Pa.
Lufkin Rule Co., Saginaw, Mich.
North Bros. Mfg. Co.,
Philadelphia, Pa.
Stanley Rule & Level Plant,
New Britain, Conn.
Vaughan & Bushnell Mfg. Co.,
Chicago, Ill.

Tools—Sheet Metal.

Bertsch & Co., Cambridge City, Ind.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Niagara Machine & Tool Works,
Buffalo, N. Y.
Ryerson & Son, Jos. T.,
Chicago, Ill.
Whitney Mfg. Co., W. A.,
Rockford, Ill.

Tools—Tinsmiths'

Bertsch & Co., Cambridge City, Ind.
Double Blast Mfg. Co.,
North Chicago, Ill.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Kniedler, Frederick J.,
Philadelphia, Pa.
Niagara Machine & Tool Works,
Buffalo, N. Y.
Ryerson & Son, Jos. T.,
Chicago, Ill.
Vaughan & Bushnell Mfg. Co.,
Chicago, Ill.

Torches—Gasoline.

Clayton & Lambert Mfg. Co.,
Detroit, Mich.
Diener Mfg. Co., G. W.,
Chicago, Ill.
Double Blast Mfg. Co.,
North Chicago, Ill.
Quick Meal Stove Co.,
St. Louis, Mo.

Transit Companies.

Cleveland & Buffalo Transit Co.,
Cleveland, Ohio

Trimings—Stove.

Fanner Mfg. Co.,
Cleveland, Ohio

Ventilators.

Berger Bros. Co., Philadelphia, Pa.
Friedley-Voshardt Co.,
Chicago, Ill.
Standard Ventilator Co.,
Lewisburg, Pa.
Thomas & Armstrong Mfg. Co.,
London, Ohio

Ventilators—Ceiling.

Hart & Cooley Co.,
New Britain, Conn.
Henry Furnace & Fdy. Co.,
Cleveland, Ohio

Vises.

North Bros. Mfg. Co.,
Philadelphia, Pa.
Rock Island Mfg. Co.,
Rock Island, Ill.

Wagons—Auto-Wheel Coaster

The Auto-Wheel Coaster Co., Inc.,
No. Tonawanda, N. Y.

Washers.

Oliver Iron & Steel Co.,
Pittsburgh, Pa.

Window Cleaners

Coleman, Allan J., Chicago, Ill.

Wire.

American Steel & Wire Co.,
Chicago, Ill.
Pittsburgh Steel Co.,
Pittsburgh, Pa.

Wood Faces.

Marsh Lumber Co.,
Dover, Ohio

Wrenches.

Bemis & Call Hdw. & Tool Co.,
Springfield, Mass.
Coes Wrench Co.,
Worcester, Mass.

WANTS AND SALES

For paid yearly subscribers, **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of not more than fifty words **WITHOUT CHARGE**. Employers wishing to secure employes, parties desiring to purchase or sell business, secure partners, or to exchange, etc., will find that these pages offer excellent opportunities to satisfy their wants. Clerks and tinsmiths looking for situations will find it to their advantage to use these columns. Those who respond to these announcements please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN AND HARDWARE RECORD."

BUSINESS CHANCES

For Sale—Hardware and paint store. Established 26 years. A-1 location. Last year's sales \$21,000. Stock, fixtures and tools worth \$9,500. Rent with seven room flat \$50.00 per month. Reason for selling, going to Europe. Price, \$7,750. August Sletz, 2567 Fullerton Avenue, Chicago, Illinois. 14-4t

Wanted to Exchange—Farm of eighty acres, in Cumberland County, Illinois. Clear. For stock of hardware from five to seven thousand. Also three hundred acre farm in Jefferson County. It is well improved and practically all cultivated. Near towns on L. and N. R. R. Good opportunity for the right man. Address John W. Akins, Effingham, Illinois. 14-4t

For Sale—Tin shop and radiator repair shop. Doing good business. There is more work than can be taken care of. Only shop. Population 800; nine mills; county seat nearest town. Fine country to draw from. Good churches and schools. C. & O. Railroad. A bargain at \$575.00. Reason for selling, poor health. Earl Poorman, P. O. Lock Box 144, Fulton, Indiana. 16-3t

For Sale—Plumbing and heating business, automobiles, tractors and supplies with fine opening for hardware, as leading store is closing out. Fine new building on corner of two best streets in northern Illinois. Small city. This is a real opportunity. Write for details. Address B-43, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 16-3t

Wanted—A partner in a going furnace and sheet metal business, doing a large volume. You must be a mechanic and have at least \$2,000. A wonderful opportunity for the right man. The business is located in a prosperous central Nebraska town of 15,000. Address B-41, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 16-3t

Business Chance—Will sell or exchange for stock of hardware, 80 acre improved farm, bordered on east by fine lake, west by State Trunk highway. It is one-half mile to city limits; county seat. 60 acres under high cultivation, balance timber. 10 room modern house; two large barns; two large buildings for machinery, granary, hen house, blacksmith shop, ice house and slaughter house. Good orchard. Triple Hardware Company, Crandon, Wisconsin. 16-3t

Over Stock to Clean Out—Two White Lily De Lux cylinder electric washers, \$92.50; two Wayne Copper tub rocker electric washers (latest model), \$105.00; three Eureka Electric vacuum cleaners, \$29.50; one dozen ¾" Glauber compression stops, \$15.00; one bbl. red barn paint, \$1.00 gallon; 1,000 lbs. No. 5 hardware wire at 5c; 500 lbs. ½" round iron at 5c; 5,000 ft. R. W.-Shareon and Allith Prouty square track, 19c; 100 dozen hangers for same—500 brackets; two 350 lb. Swedish cream separator, \$29.75; two 500 lb. Swedish cream separator, \$35.00; one 6 H. P. Bates and Edmonds gas engine with magnet, \$133.00. Above all high grade goods, fully warranted. Vandervoort Hardware Company, Lansing, Michigan. 16-3t

BUSINESS CHANCES

For Sale—Tinner and plumbing shop at Wheaton, Illinois. This is a good chance for either a tinner or plumber or both. There is plenty of work for two men at all times. R. D. Grieves, Wheaton, Illinois. 17-3t

Wanted to Buy—Small hardware store, in or near Chicago. No objection to machine shop in connection. Address B-44, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 16-3t

Wanted—A reliable partner, must be a tinner, in retinning, radiator and fender works. Necessary capital, \$3,000. Address B-47, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 17-3t

For Sale—Store and stock consisting of hardware, agricultural implements, automobiles, pumps, windmills and gasoline engines. Do also tinning and general repairing. Illinois town. Stock will invoice about \$8,000. Will sell stock and rent store if necessary. Village is of about 1,000 people with a good farming community surrounding. Tire factory just begun. Have city water and have begun preliminary proceedings for a sewer system to be put in next year. Address B-48, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 17-3t

HELP WANTED

Wanted — Tinner. Steady work to right men. C. E. Arnold, 823 Davis Street, Evanston, Illinois. 16-3t

Wanted—Tinner; for steady job; come at once. Address all replies to S. J. Pelz, Clinton, Wisconsin. 15-3t

Wanted at Once—Good all around tinner for steady job the year around. A. W. Wagner, Woodstock, Illinois. 17-3t

Wanted—Good all around tinner and furnace man. Steady job. \$42.00 per week. Paul Groeschel, Marshall, Missouri. 17-3t

Wanted—Tinner to do general run of job work. \$9 per day. Address M. S. Warren, 535 Fifth Street, Port Arthur Texas. 15-3t

Wanted—Two or three good tinner and furnace men. Union shop. Wages good. Southern Illinois. Write to R. Barden, 413 West Main Street, Carbondale, Illinois. 17-3t

Wanted—A good all around tinner. Wages \$1.00 per hour, 9 hours per day. Non-union. Married man preferred. Steady work. Sterling Sheet Metal and Roofing Company, Sterling, Colorado. 17-3t

Wanted at Once—Man capable of doing plumbing and other work along the hardware line, in a small town. A good place for the right man. Write to Kingston and Desmond, Mukwonago, Wisconsin. 16-3t

Wanted—Good plumber and tinner, one who can do lead work and hot air furnace work. Steady job for competent man. Write stating wages expected and hours in first letter. Address Lock Box 156, Laurel, Nebraska. 16-3t

Wanted—At once, one first-class tinner and furnace man; steady work; open shop; state wages wanted in first letter. Address Mr. George W. Howell, 310 West 3rd Street, Greensburg, Pennsylvania. 15-3t

Wanted at Once—One good plumber; also with some knowledge of hot water and hot air heating. Married man preferred. Good town and schools. County seat, 3,000 population. State wages wanted in first letter. Edward Kelly, Carthage, Illinois. 17-3t

Wanted — Experienced hardware clerk in one of the largest cities in North Dakota. Permanent position assured to right man. Advise, giving experience, where employed last, age, nationality, whether married or single, salary expected and how soon position could be accepted. Barnes & Nuss Company, 118 South Third Street, Grand Forks, North Dakota. 16-3t

SITUATION WANTED

Situation Wanted—By first-class all around tinner and furnace man with a good reliable firm. Steady employment. Am married. Must be in town of from two to ten thousand. State wages in first letter. Address Henry Bailey, 35-57-11-Street, Rock Island, Illinois. 15-3t

Situation Wanted—By first-class sheet metal worker, who can also do pipe fitting and plumbing, wants situation as maintenance man in hotel or factory. Can furnish own tools, complete shop equipment included. Address V-2336 West Monroe Street, Chicago, Illinois. 16-3t

Situation Wanted—By a first-class tinner. Understand all branches of the trade and can also do furnace heating and ventilation, lay out my patterns and work. Have had 12 years' experience. Am 32 years of age. Can take up new position at once. Address 603 Phelps Street, Peoria, Illinois. 17-1t

Situation Wanted — By middle-aged man. Am thoroughly familiar with the heating business in all its branches; also efficient in the plumbing line. Can do estimating and selling. Address B-39, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 14-3t

Situation Wanted—By good reliable tinner and furnace man. Can also do plumbing and lead work. Am a first class worker. Must be steady job at \$42.00 per week. Please address B-37, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 14-4t

Situation Wanted — By experienced hardware clerk and salesman. Have had eight years' experience. Am thirty years old, married, and capable of taking entire charge of store. Address B-40, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 15-3t

Situation Wanted—By plumber with state license. Can also do any kind of warm air heating and estimate jobs. Will erect windmills and do pump work if necessary. Have had sixteen years' experience. Kindly address B-38, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 14-4t

Situation Wanted—By first-class tinner, plumber and steam fitter. Can also do electric wiring and auto radiator repairing. Have had 13 years' experience. Write particulars, giving living conditions and wages. Kindly address B-42, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 14-4t

Situation Wanted—By first-class sheet metal worker. Have had ten years' experience in some of the largest heating and ventilating shops in the country. Can lay out patterns, make estimates and capable of taking charge of shop. Have also had plumbing experience. Address B-36, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 14-3t

Situation Wanted—As general foreman or superintendent of sheet metal shop. Am thoroughly experienced estimator in every branch of the business. Excellent executive abilities; first-class pattern cutter; exceptionally well qualified in the selling end of the business. 100% efficiency guaranteed. Please address B-45, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 16-3t

TINNERS' TOOLS

For Sale—Set tinner's tools, including brake. Address 718 Sycamore Street, Eureka, Kansas. 17-3t

Wanted—To buy tinner's tools. Send list of what you have and price. G. A. Dawson, Rolfe, Iowa. 16-3t

Wanted—Men who know their trade from A to Z. That's the way the advertisements for Help Wanted start. You can learn more about your trade if you read good books on the subjects you are less familiar with. For a book covering the subject of Warm Air Heating thoroughly, you should read Snow's Furnace Heating, 234 pages. Price \$2.50. With AMERICAN ARTISAN one year (52 issues), \$3.85. Order your copy today from AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.